PUBLIC HEARING
AGENDA ITEM # 2

CITY OF MORGAN HILL

SUMMARY STAFF REPORT

To: PLANNING COMMISSION

Date: February 9, 2010

From: COMMUNITY DEVELOPMENT DEPARTMENT

Subject: GENERAL PLAN AMENDMENT, GPA-09-09: CITY OF MORGAN HILL CIRCULATION ELEMENT UPDATE GPA & RELATED ZONING CODE SECTION 18.48.125 AMENDMENT, AND CONSIDERATION OF FINAL ENVIRONMENTAL IMPACT REPORT (EIR)

STAFF RECOMMENDATION

Staff recommends that the Planning Commission focus on the "Key Considerations" discussed in this Staff Report on the following pages, and determine any Commission-recommended changes to the proposed Final Draft Circulation Element dated 2-3-2010, and then incorporate that into the motion as suggested modifications to the Circulation Element General Plan Amendment.

Staff recommends that the Planning Commission, by motion, recommend to the City Council that it:

1. Adopt a Resolution certifying the Final EIR, with Findings and a Statement of Overriding Considerations, and adopting a Mitigation Monitoring & Reporting Program;
2. Adopt a Resolution adopting the Circulation Element General Plan Amendment, with all proposed model-recommended changes and eliminating the San Pedro-Spring realignment; and deferring decisions about any amendments for Monterey Road through downtown and for Walnut Grove North Extension.
3. Adopt an Ordinance deleting Section 18.48.125 regarding traffic level of service from the Zoning Code due to inconsistency with existing and proposed LOS standards.
4. Adopt revised "Guidelines for Preparation of Transportation Impact Analyses", which incorporate updated Level of Service definitions and standards.

The actual Findings and Statement of Overriding Considerations will be contained in the Resolutions presented to the City Council for its February 24, 2010 public hearing, at which time the Council is expected to take action on the FEIR and the Circulation Element & Zoning Ordinance Amendments.

PROPOSED CIRCULATION ELEMENT GENERAL PLAN AMENDMENT (GPA)

The Final Draft of the Proposed Circulation Element Update GPA incorporates refined language in the discussion, goals, policies and actions of the Element, based on comments from the Planning Commission, the public, agencies, and the EIR analysis and findings. The proposed Circulation Element reflects staff's and the transportation consultant's recommended content. Most of the suggestions made at the Planning Commission's August and September 2009 workshops have been incorporated, such as emphasis in goals and policies on safety and neighborhood protection, and characterizing the status of High Speed Rail; but certain suggestions have not, such as possibly *not* proposing LOS F downtown or establishing a "floor" for an alternate LOS F.

KEY CONSIDERATIONS FOR DEVELOPMENT OF PLANNING COMMISSION RECOMMENDATION TO THE CITY COUNCIL

The attached Expanded Staff Memorandum presents much information about the Circulation Element Amendment project, however staff suggests that the Planning Commission may be in a position to focus on the following nine (9) considerations during the public hearing and in developing its recommendation to the City Council.

1. The specific widths of arterial corridors are not defined; a classification system with sub-classifications is described, and the major roadways are described as to intended configuration. Certain of these, such as the Butterfield Corridor and the Hale/Santa Teresa Corridor, have been and/or are planned for future construction as Multi-Modal Arterials with Class 1 Bikeway/Pedestrian Path within a linear park; this type of facility will have sufficient right of way to allow future conversion to add lanes if necessary.

2. As implementation items for the Circulation Element, each new roadway project will be designed to meet the intended purpose as described in the Element. New street standards will be established for the new roadway classifications and sub-classifications; draft examples are attached which illustrate a possible 90-foot right-of-way for a Multi-Modal Option #1 2-Lane Divided Arterial Park with Median and Linear Park (which reflects the intention for new segments of Hale/Santa Teresa); as well as a possible 72-foot right-of-way for a Multi-Modal Option #2 2-Lane Arterial with 2-Way Left Turn Lane (which reflects a possible configuration for new segments for 2-lane arterials such as Murphy/Mission View).

3. There is currently no Policy or Action in the proposed Element that indicates any sense of priority or timing for certain improvements or "batches" of improvements. Based on the results of the traffic modeling, the Planning Commission may want to consider recommending to the City Council that a policy with the below chart be added to the Circulation Element. Note that based on further analysis of the Hale/Santa Teresa planned segments, there is flexibility to shift that improvement to post-2015 and construct it at some time prior to 2030.

City of Morgan Hill Roadway Improvements First Phase (between 2010 - 2020)

Extension of Butterfield Blvd as a 2-lane collector between Madrone Pkwy and Cochrane Rd
Extension of Butterfield Blvd as a 4-lane arterial between Tennant Ave and Monterey Rd
Extension of Hale Ave/Santa Teresa Blvd as a 2-lane multi-modal arterial between Main Ave & Spring Ave [1]
Closure of Fisher Ave between Railroad Ave and Butterfield Blvd Extension
Closure of DeWitt Ave between Price Drive and Spring Ave (if final design incorporates and Council approves) [2]
Tennant Ave widening as a 4-lane arterial between US 101 SB Ramps and Murphy Ave
Construct a loop on-ramp from eastbound Tennant Ave to Northbound US 101
Monterey Rd widened to a 4-lane arterial between Cochrane Rd and Old Monterey Rd / Llagas Creek Dr
Extension of Llagas Creek Dr as a 2-lane collector between Hale Ave and Monterey Rd
Realignment of Old Monterey Rd to intersect with Llagas Creek Dr extension
Dunne Ave widened to 4-lane arterial between Monterey Rd & Del Monte Ave; 2-lane improvement west of Del Monte

City of Morgan Hill Roadway Improvements Second Phase (by 2030)

Extension of Madrone Parkway as a 2-lane arterial between Hale Ave and Monterey Rd [3]
Realignment of DeWitt Ave as a 2-lane arterial with Sunnyside Ave [1]
Extension of Mission View Dr as a 2-lane collector between Cochrane Rd and Vista del Lomas Ave
Mission View Dr upgraded to a 2-lane multi-modal arterial between Cochrane Rd and Half Rd [4]
Extension of Murphy Ave/Mission View Dr as a 2-lane multi-modal arterial between Half Rd & Diana Ave [4]
Monterey Rd widened to a 6-lane arterial between Burnett Ave and Cochrane Rd
Cochrane Rd widened to a 6-lane arterial between Monterey Rd and Mission View Dr
Main Ave widened to a 4-lane arterial between Depot St and Butterfield Blvd

Watsonville Rd widened to a 4-lane arterial between La Alameda and Monterey Rd
Extension of Serene Dr as a 2-lane collector between Jarvis Dr and Central Ave
Dunne Avenue intersection at Depot Street closed with Dunne Avenue grade separation from UP railroad tracks
Extension of McKevly Lane as a 2-lane collector between West Edmundson Ave and La Crosse Dr [5]
Tennant Ave widened to a 6-lane arterial between US 101 and Butterfield Blvd
Extension of Hill Rd/Peet Rd as a 2-lane collector between Half Rd and Main Ave [6]

Notes:

1. The Hale Avenue/Santa Teresa Boulevard/DeWitt Avenue corridor between Tilton Avenue and Edmundson Avenue requires 2-lanes by Year 2030. The extension of Hale Avenue between Main Avenue and Spring Avenue, and realignment of DeWitt Avenue with Sunnyside Avenue will provide: 1) a more direct connection between the northern and southern portions of Morgan Hill, 2) shift though traffic from neighborhood streets such as Peak Avenue, and 3) provide a continuous street parallel to Monterey Road west of downtown.
2. The Year 2030 model network and forecasts include closure of DeWitt Avenue between Price Drive and Spring Avenue. However, ultimate access configuration would be determined upon design and construction of the Hale Avenue/Santa Teresa Boulevard extension as a 2-lane arterial between Main Avenue and Spring Avenue.
3. The Madrone Parkway extension between Hale Ave. and Monterey Rd. requires a 2-lane grade separated crossing by 2030.
4. The Murphy Avenue/Mission View Drive corridor between Cochrane Road and Dunne Avenue requires a 2-lane multi-modal arterial by Year 2030. The new connections of Murphy Avenue between Half Road and Diana Avenue will provide capacity and operational benefits to the community east of US 101. Widening to 4-lanes is not needed until after 2030.
5. This improvement will improve distribution of local traffic in southwest Morgan Hill on Monterey Rd & Edmundson Ave.
6. The extension of Hill Road between Half Road and Main Avenue will provide capacity and operational benefits to the community east of US 101.

4. Note that analysis prepared for the Final EIR presents information about traffic levels under a "No Extension of Hale Ave/Santa Teresa Blvd", which indicates that from a traffic demand standpoint the improvement does not necessarily need to be constructed by 2015; but it is recommended to be constructed by 2030 to provide for the single, continuous 2-lane multi-modal arterial between Main Ave & Spring Ave as planned by the Circulation Element.

5. Please refer to pages 19-21 of the Expanded Staff Memorandum – Attachment to Staff Report, for a discussion of the Policy Reasons for allowing LOS E at selected locations, and LOS F in the Downtown. Fehr & Peers has explored a possible option of identifying a "floor" to a LOS F, which could consist of a using the V/C ratio and use of micro-simulation when the critical V/C is projected to exceed 1.3 or 30 percent more than the theoretical capacity. However, even though an analysis may be required and conducted, it is possible that improvements required to reduce the projected critical V/C to less than 1.3 may not be feasible. For this reason, it is recommended that the City simply exempt downtown from a LOS standard. This does not preclude the City, Redevelopment Agency, developers or property owners from making physical and operational improvements in the future, but does not subject individual project applicants to study requirements and the possibility of future EIRs if no possible, feasible or desirable mitigation is identified to achieve an LOS standard.

6. A proposed revision of the city's Guidelines for Preparation of Transportation Impact Analyses is proposed, as the LOS Definitions have been shifted out of the Circulation Element itself and into these Guidelines, along with a map of where the LOS E and F levels are allowed.

7. To be consistent with the modifications to planned future roadway improvements and the City's Level of Service (LOS) policies for roadways described above, the project also proposes to delete the following provision from the City of Morgan Hill Zoning Ordinance:

2.4.1 <u>18.48.125 Traffic in Excess of Carrying Capacity</u>

No use shall generate vehicular traffic which would cause an adjacent arterial or collector road to exceed a traffic-carrying capacity of Level of Service D in areas at least fifty percent developed without providing appropriate mitigation measures in the form of traffic-control devices, restrictions on hours of operation, or staggered work hours. A level of service "C"

standard shall apply as the design criteria for roadway improvements that serve predominately new development. Traffic-generating potential shall be determined by use of Caltrans trip-generation studies or other information acceptable to the director of public works.

8. For details about projected levels of service (LOS) under the various scenarios evaluated by the traffic studies and EIR, please refer to the attached Expanded Staff Memorandum. Note the following discussion of the affected intersections for which mitigation measures have been identified that would improve projected LOS to the existing LOS D+ standard ---- *EVEN UNDER THE WORST-CASE CUMULATIVE SCENARIO WITH MONTEREY ROAD NARROWED TO TWO LANES.* Under the narrowing scenario, only the Downtown narrowed Monterey Road segment and the Main/Monterey intersection would fall below D+ and would be projected at LOS F by 2030 with no identified mitigation. If the LOS standards are adjusted for the following intersections that have identified mitigations, then whether to pursue the following mitigation/improvement project becomes optional:

The **Main Avenue/Butterfield Boulevard signalized intersection** is currently operating at "C-" in the AM peak and "D+" in the PM peak. It falls to "D+" in both the AM & PM peak hours under the Current General Plan; remains "D+" for both the AM & PM peak hours under the Proposed Project Model-Recommended Network under Current General Plan Land Uses; and falls to "D" in both the AM and PM peak hours under the Cumulative GPA Land Use and Circulation Amendments (i.e. with Downtown Specific Plan and Monterey Road Narrowing and all other GPAs). Operations would be about 39 seconds of average delay in both the AM and PM peaks. The following improvements would mitigate the impact and improve the intersection operations to LOS D+ or better under Cumulative GPA Conditions:

- **Install a second northbound left-turn lane** *(may require right of way from the northwest and southeast corners of the intersection, but this is considered physically feasible)*

Under the Proposed LOS Policy, which is one of the proposed GPAs, and thus part of the Cumulative GPA Conditions, the Main/Butterfield signalized intersection would be allowed to operate at LOS E, and therefore the projected LOS D would mean that the intersection would operate acceptably, there would be no cumulative impact, and no mitigation would be required.

The **Dunne Avenue/Monterey Road signalized intersection** is currently operating at "C" in the AM peak and "D+" in the PM peak. It remains "C" in the AM and "D+" in the PM peak hours under the Current General Plan; and also remains "C" in the AM and "D+" in the PM peak hours under the Proposed Project Model-Recommended Network under Current General Plan Land Uses. LOS falls to "C-" in the AM peak hour and "D" in the PM peak hour under the Cumulative GPA Land Use and Circulation Amendments (i.e. with Downtown Specific Plan and Monterey Road Narrowing and all other GPAs). Operations would be about 48 seconds of average delay in the PM peak hour. The following improvements would mitigate the impact and improve the intersection operations to LOS D+ or better under Cumulative GPA Conditions:

- **Install an eastbound right-turn overlap phase, and a southbound approach with a left-turn, through lane and shared through-right lane.**

Analysis of **unsignalized intersections** in 2030 showed that four intersections would operate below LOS D during both the AM and PM peak hours:

Monterey Road/Central Avenue	F in both AM and PM peak hours
Monterey Road/Fourth Street	F in both AM and PM peaks hours
Monterey Road/Fifth Street	F in both AM and PM peak hours
Dunne Avenue/Del Monte Avenue	E in AM peak hour & F in PM peak hour

The results of peak-hour signal warrant analysis indicate that only the Dunne Avenue/Del Monte intersection satisfies the peak hour warrant analysis. However, **Downtown Specific Plan policies and proposed Circulation Element policy calls for monitoring of actual conditions and safety, and the possibility of intersection and/or operational improvements if determined desirable by the City.**

The **Dunne Avenue/Del Monte Street unsignalized intersection** currently operating at "B" in the AM and PM peaks. It falls to "C" in the AM & PM peaks under the Current General Plan, stays "C" in the AM but fall to "D" in the PM peak hour under the Proposed Project Model-Recommended Network under Current General Plan Land Uses, and falls to "E" in the AM and "F" in the PM peak hour under the Cumulative GPA Land Use and Circulation Amendments (i.e. with Downtown Specific Plan and Monterey Road Narrowing and all other GPAs). Operations would be about 37 seconds of average approach delay in the AM peak hour and 74 seconds of average approach delay during the PM peak hour. The following improvement would mitigate the impact and improve the intersection operations to LOS C (20.6 seconds of average delay) in the AM peak and LOS C+ (20.8 seconds of average delay) in the PM peak under Cumulative GPA conditions:

- **Install a traffic signal**

With incorporation of the above mitigation measure, all cumulative impacts are considered less-than-significant under the Existing LOS Policy. Under the Proposed LOS Policy, which is one of the proposed GPAs, and thus part of the Cumulative GPA Conditions, the Dunne/Del Monte unsignalized intersection would be allowed to operate at LOS F, and therefore the projected LOS E and F would mean that the intersection would operate acceptably, there would be no cumulative impact, and no mitigation would be required.

9. Even though various intersections are not currently projected to actually attain LOS E or F by the traffic study, there are sound policy reasons for the City to state its intensions as far as the desirability or undesirability of continuing to add lanes or widen intersections to accommodate more vehicular travel. Please refer to pages 19 – 21 for these policy reasons, which are also summarized in the proposed Element.

ATTACHMENTS

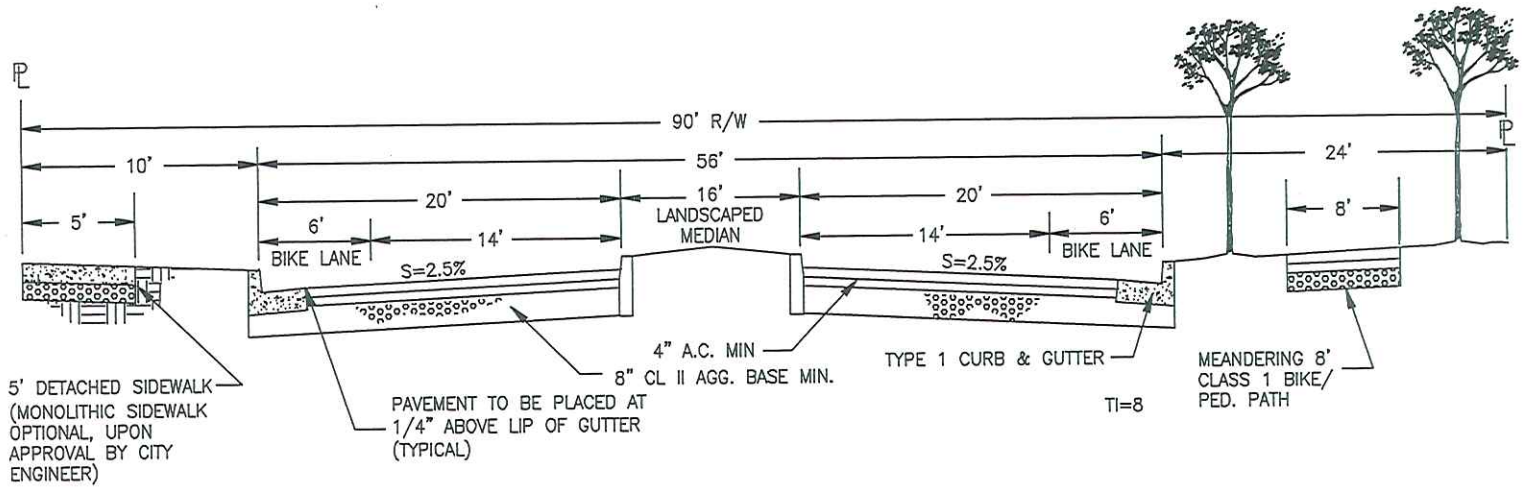
- Figures illustrating a possible 90-foot right-of-way for a Multi-Modal Option #1 2-Lane Divided Arterial Park with Median and Linear Park; as well as a possible 72-foot right-of-way for a Multi-Modal Option #2 2-Lane Arterial with 2-Way Left Turn Lane
- Expanded Staff Memorandum
- Revised "Guidelines for Preparation of Transportation Impact Analyses"
- Proposed Circulation Element General Plan Amendment (clean, with no changes from existing Element shown)

PREVIOUSLY DISTRIBUTED TO PLANNING COMMISSIONERS

(AND AVAILABLE FOR PUBLIC REVIEW AT THE CITY DEVELOPMENT SERVICES CENTER AND ON THE CITY'S WEBSITE)

- Draft EIR, August 2009 (containing Future Improvements Study, Traffic Study & Appendices)
- Final EIR, January 2010 (containing Santa Teresa and Walnut Grove traffic analyses)
- "Track Changes" showing all proposed amendments to existing Circulation Element

THIS PAGE LEFT BLANK INTENTIONALLY

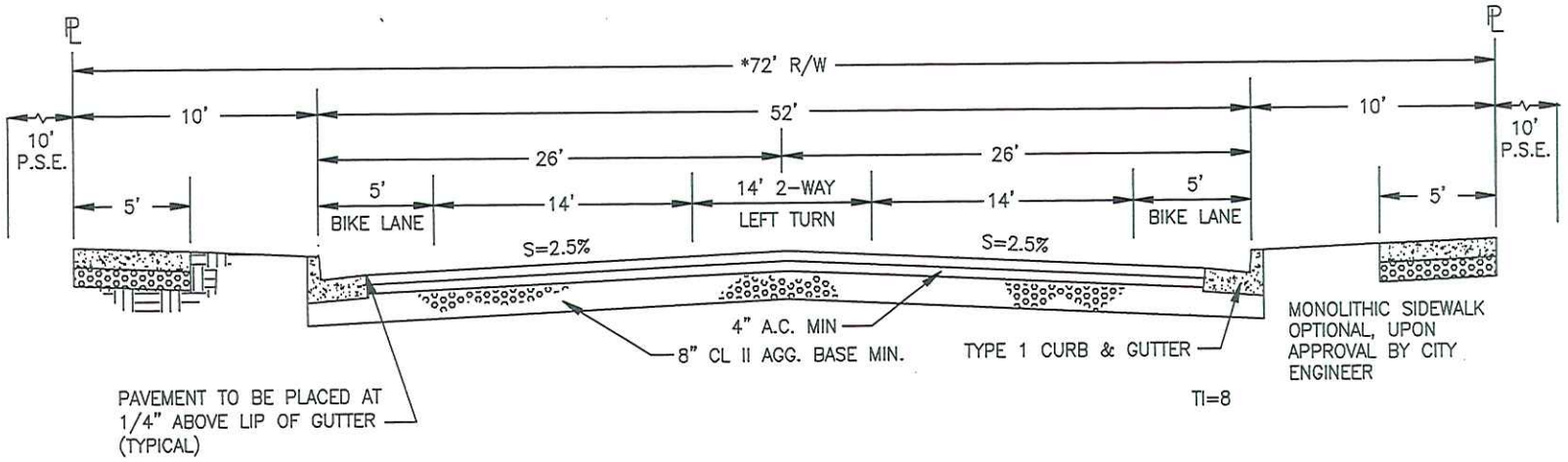


MULTI-MODAL OPTION #1
2 LANE DIVIDED ARTERIAL WITH MEDIAN AND LINEAR PARK

CITY OF MORGAN HILL
Public Works

G:\R-14\PROJ\LIBRARY\DETAILS\WRGHILL\Multimodal_Option.dwg

N.T.S.



*: 64' R/W width acceptable on less significant arterial streets.

CITY OF MORGAN HILL
Public Works

MULTI-MODAL OPTION #2
2 LANE ARTERIAL WITH 2-WAY LEFT TURN LANE

G:\R-14\PROJ\LIBRARY\DETAILS\MRGHILL\Multimodal_Opt2.dwg

N.T.S.

CITY OF MORGAN HILL

EXPANDED STAFF MEMORANDUM - ATTACHMENT TO STAFF REPORT

To: **PLANNING COMMISSION**

Date: February 9, 2010

From: **COMMUNITY DEVELOPMENT DEPARTMENT**

Subject: **GENERAL PLAN AMENDMENT, GPA-09-09: CITY OF MORGAN HILL CIRCULATION ELEMENT UPDATE GPA & RELATED ZONING CODE SECTION 18.48.125 AMENDMENT, AND CONSIDERATION OF FINAL ENVIRONMENTAL IMPACT REPORT (EIR)**

PURPOSE OF PUBLIC HEARING AND STAFF RECOMMENDATION

The purpose of the public hearing is for the Planning Commission to consider the Final EIR and Final Draft Proposed Circulation Element, along with this staff report and public testimony, and develop a recommendation to the City Council for its February 24, 2010 public hearing regarding certification of the Final EIR and adoption of the Circulation Element General Plan Amendment and related zoning code amendment. Staff recommends that the Planning Commission recommend to the City Council that it:

1. Adopt a Resolution certifying the Final EIR, with Findings and a Statement of Overriding Considerations, and adopting a Mitigation Monitoring & Reporting Program;
2. Adopt a Resolution adopting the Circulation Element General Plan Amendment , with all proposed model-recommended changes and eliminating the San Pedro-Spring realignment; and deferring decisions about any amendments for Monterey Road through downtown and for Walnut Grove North Extension.
3. Adopt an Ordinance deleting Section 18.48.125 regarding traffic level of service from the Zoning Code Code due to inconsistency with existing and proposed LOS standards.
4. Adopt revised "Guidelines for Preparation of Transportation Impact Analyses", which incorporate updated Level of Service definitions and standards.

PROJECT DESCRIPTION

The proposed Circulation Element GPA Element identifies planned local roadway improvements necessary to provide capacity for projected increases in traffic through 2030, and proposes a Tiered Level of Service (LOS) Policy Amendment and a new "Smart Growth and Sustainable Community" transportation planning goal and policies. The currently proposed amendments include changing the planned width of several existing and planned roadways/corridors within the City (see Summary Chart below), changing the planned alignment of the future Murphy Avenue Corridor to connect to Mission View Drive, removing the planned San Pedro Avenue/Spring Avenue connection, removing the planned extension of Foothill Avenue between Barrett and Tennant Avenues, and adding a planned re-routing of Depot Street through the existing Community & Cultural Center parking lot to connect to the Church Street intersection. The roadway planned capacity changes all involve reduction in the numbers of planned lanes for each roadway, except that Tennant Avenue between Butterfield and the US 101 on-ramps would increase from four lanes to six lanes, and Monterey Road from Cochrane to Old Monterey Road would increase from three lanes to four lanes. The proposed GPA would add Madrone Parkway as a planned grade separation from the railroad tracks, although it also contains a

proposed policy that would allow the City to pursue establishing an alternate or interim two-lane at-grade Madrone Parkway Crossing in exchange for closing the existing at-grade crossing at San Pedro.

NOTE that while the EIR and transportation studies prepared for the Circulation Element Update GPA do contain information about possible Circulation Element GPAs to **narrow Monterey Road** from four to two lanes from Main Avenue to Dunne Avenue, and to possibly shift the planned location of a planned **Walnut Grove North Extension** over to the west, **these two possible plan modifications are NOT being considered as part of the currently proposed General Plan Amendment.**

TABLE ES-1
SUMMARY OF MODEL-RECOMMENDED ROADWAY NETWORK AMENDMENTS
TO THE 2001 GENERAL PLAN CIRCULATION ELEMENT

Roadway	Current GP Roadway (lanes)	Recommended Roadway (lanes)
1. Hale Ave/Santa Teresa Blvd between Tilton Ave and Spring Ave[1]	4	2
2. Monterey Rd between Watsonville Rd and Middle Ave	6	4
3. Butterfield Blvd between Cochrane Rd and Monterey Rd	6	4
4. Condit Rd between Half Rd and Tennant Ave[2]	4	2
5. Murphy Ave to align with St. Louise Dr between Cochrane Rd and Half Rd (St. Louise does not connect with Half Road under Model-Recommended Roadway scenario)	4	None
6. Murphy Ave to align with Mission View between Cochrane Rd and Half Rd (Murphy Ave realigned with Mission View Dr)[3]	2	2
7. Murphy Ave between Half Rd and Middle Ave	4	2
8. Hill Rd between Half Rd and Maple Ave[4]	4	2
9. Extension of Foothill Ave between Barrett Ave and Tennant Ave	2	None
10. Madrone Pkwy between Hale Ave and Monterey Rd[5]	4	2
11. Cochrane Rd between Mission View Blvd and Peet Rd	4	2
12. Main Ave between Butterfield Blvd and Hill Rd	4	2
13. Dunne Ave between Hale Ave/Santa Teresa Blvd and Del Monte Ave	4	2
14. Edmundson Ave between Sunnyside Ave and Piazza Wy	4	2
15. Tennant Ave between Butterfield Blvd and US 101 SB Ramps	4	6
16. Tennant Ave between Murphy Ave and Hill Rd	4	2
17. Watsonville Rd between Santa Teresa Blvd and La Alameda	4	2
18. Middle Rd between Monterey Rd and Murphy Ave[6]	4	2

Notes:

1 Hale Ave/Santa Teresa Blvd between Tilton Ave and Spring Ave would be a two-lane multi-modal arterial by 2030.

2 Roadway would remain a two-lane collector. Right-of-way for four lanes would no longer be encouraged as it is in the 2001 General Plan.

3 Mission View Drive between Cochrane Road and Half Road would be a two-lane multi-modal arterial by 2030, but right-of-way would be reserved for a four-lane arterial.

4 Roadway would remain a two-lane arterial. Right-of-way for four lanes would no longer be encouraged as it is in the 2001 General Plan.

5 A 2-lane grade separated arterial will be needed by 2030.

6 The US 101/Middle Road interchange is not included in the Year 2030 model-recommended roadway capacity assumptions.

Source: Fehr & Peers, June 2009.

The currently proposed Circulation Element GPA also includes an amendment of the city's Level of Service (LOS) policies for roadways, and deletion of zoning code Section 18.48.125 regarding traffic level of service, to establish a **Tiered LOS Policy used to evaluate acceptable levels of traffic during peak AM and PM periods**, as follows:

As the Level of Service (LOS) Policy and design criteria for roadway improvements, use a Tiered LOS Standard as follows:

- LOS F in the Downtown (all intersections and segments involving streets including and bounded by Del Monte Street, Main Avenue, Depot Street and Dunne Avenue) in order to establish a higher priority for pedestrians, bicycles and transit within the downtown, rather than to widen roads and/or do intersection improvements for the purpose of accommodating more vehicular travel through the downtown; and

- LOS D for intersections and segments elsewhere (rather than current D+ standard); except

- Allow LOS E for identified freeway ramps, road segments and intersections that (1) provide a transition to and are located on the periphery of downtown; (2) are freeway access zones; and/or (3) where achieving LOS D would involve unacceptable impacts on existing buildings or existing or planned transportation facilities including roads, sidewalks, bicycle and transit facilities; or would involve extraordinary costs to acquire land and existing buildings and build the improvement in relation to benefits achieved; or the facility would be widened beyond requirements to serve local traffic, in that the facility accommodates a significant component of peak hour sub-regional and regional through traffic. In order to reduce the incentive for regional travel to be drawn off the freeway and onto local streets, protect neighborhoods, and to create an incentive for using alternate modes of travel, LOS E during peak hours of travel is acceptable for the following identified freeway ramps, road segments and intersections:

Cochrane Road and Monterey Road
Monterey Road and Wright Road
Monterey Road and Central Avenue
Hale/Santa Teresa and West Main Avenue
Santa Teresa and West Dunne Avenue
Butterfield Boulevard and East Main Avenue
Butterfield Boulevard and East Dunne Avenue
Madrone Parkway and Monterey Road
Tennant Avenue and Monterey Road
Tennant Avenue and Butterfield Boulevard
Watsonville Road/Butterfield Boulevard and Monterey Road
Cochrane Rd Freeway Access Zone: Madrone Pkway/Cochrane Plaza to Cochrane/Mission View Dr.
Dunne Avenue Freeway Access Zone: Walnut Grove/East Dunne to Murphy/East Dunne Avenue
Tennant Avenue Freeway Access Zone: Juan Hernandez/Tennant to Murphy/Tennant Avenue
Freeway Ramps

The proposed Circulation Element Amendment also proposes a new Goal and new Policies related to smart growth and sustainable community strategies and a multi-modal transportation system, including providing for balanced pedestrian, bicycle and transit facilities along with vehicular facilities.

The project also includes deletion of Section 18.48.125 from the Performance Standards chapter of the Zoning Ordinance, which describes LOS standards in conflict with existing and proposed standards.

BACKGROUND INFORMATION REGARDING TRANSPORTATION MODEL EFFORT and PROJECT DESCRIPTION FOR CIRCULATION ELEMENT UPDATE

In September 2007 the City of Morgan Hill entered into a contract with Fehr & Peers transportation consultants, in order to comply with one of the mitigation measures associated with certification of the Ojo de Agua Redevelopment Project Amendment EIR and adoption of the Morgan Hill Redevelopment Plan Amendment in November 2006. The mitigation measure required that: *"Approximately every five years, prior to adoption of the Agency's Implementation Plan, the Agency shall participate in and fund (if funding is needed) completion of a city-wide Transportation Impact Analysis (TIA) in order to provide information appropriate for updates to the City's and Agency's schedule for funding and implementing transportation improvements. The Agency shall assist, as feasible, with funding improvements within the Project Area or of primary benefit to the Project Area, so that improvements are constructed in a timely manner that accommodates growth and development".*

The Morgan Hill Redevelopment Agency has stated that among its top priorities are revitalizing Downtown, and implementing circulation improvements supportive of economic development and elimination of blight in the RDA Project Area. In that certain key transportation improvements are included on the list of projects proposed to be funded with RDA funds, it is desirable to confirm information related to the facilities prior to final design. The RDA therefore funded development of a new traffic model to be used to analyze the existing General Plan Circulation Element, with respect to the need for, size of, and general timing of planned circulation system improvements in the city.

In order to implement the mitigation measure, the Redevelopment Agency entered into a contract with Fehr & Peers transportation consultants in August 2007, to (1) develop a new citywide traffic model; (2) review the city's Level of Service (LOS) Policy *[General Plan Policy 3d]*, as well as the city's Guidelines for Preparation of Transportation Impact Analyses (TIA Guidelines) and other policies such as the CEQA Thresholds of Significance for transportation impacts; and (3) prepare a Transportation Impact Analysis of circulation network amendments, including a Cumulative Analysis that would reflect all proposed circulation and land use General Plan Amendments.

The "Travel Demand Forecasting Model & Future Improvements Study" (June 2009), which is an appendix to the Traffic Impact Analysis (Appendix C of the Draft EIR) done for the Circulation Element EIR, documents the process of constructing, calibrating, validating and using the model to obtain the resultant proposed Circulation Element amendment of planned roadways. The 2030 traffic projections were developed using the City's validated travel demand forecast (TDF) model (which was validated to 2007 existing conditions), which is intended to address both local and sub-regional traffic demand. Compared to the previous City of Morgan Hill TDF model and the model used for the South County Circulation Study (SCCS), the updated City TDF model is a focused stand alone planning tool that includes:

- more recent land use projections,
- a more disaggregate TAZ system,
- more land use categories,
- updated daily trip rates,
- different assignment parameters, and
- a more detailed roadway network.

The local model was structured to be consistent with the regional VTA model's assumptions about regional land use and circulation, with more detailed local model structure and inputs for city land uses. The local model was to assess at a much greater level of detail when certain roadway improvements would be needed, based on local growth projections in the context of regional growth. It was not anticipated that the model results would indicate that some of the planned roadway capacities would not

be needed by 2030. In fact, the initial model results led staff and the consultants to double-check all inputs and re-run the model, to ensure valid results. Essentially, the model shows that planned roadway improvements are indeed needed for "connectivity", but "capacity" of selected roadways did not need to be as great as the prior Morgan Hill model had indicated.

The prior Morgan Hill model was based on trip counts taken in about 1997, prior to the widening of US 101. Therefore, trip counts on local roads were higher than what occurred after 101 was widened, and projections and planning for the city's 2001 Circulation Element were based off of the 1997 levels. The base information in the SCCS/VTA traffic model used the planned roadway widths from the 2001 City of Morgan Circulation Element, which was based on the pre-101-widening data. Also the earlier model validation was not as extensive and as accurate as the current version of the Morgan Hill model.

The *"Morgan Hill Projections 2009"* report by Morgan Hill planning staff documents the methods and assumptions used to develop the land use data and growth projections used in the citywide traffic model developed by Fehr & Peers, which was the basis for a study of transportation network needed to accommodate future Morgan Hill traffic. The projected 2030 Population of 55,400 for the Morgan Hill jurisdiction in 18,560 housing units, with 23,640 jobs in the "city" and 24,560 jobs in the "sphere", are somewhat higher numbers than previous modeling for population and housing, and are very similar for jobs. The projections reflect "near buildout" of Morgan Hill west of US 101 by 2030. For lands east of US 101, additional development is projected to occur by 2030, however a significant amount of that area is assumed to develop after 2030. Therefore the results have not occurred due to lower development projections, but more precise modeling as explained earlier.

City Council Direction regarding Project Description. The City Council adopted revised TIA Guidelines on May 28, 2008, and also at that time initiated a General Plan Amendment to propose revision of the LOS Policy to a "tiered" approach that would allow or Level of Service "F" in the downtown area, and LOS "E" at selected locations.

The City Council also directed that the Circulation Element Update was to include any refinements of the planned circulation system that the consultants would recommend based on the traffic model results, including the configuration of the Murphy Corridor and Hill Corridor. Earlier Council direction had initiated study of an amendment to not connect San Pedro to Spring, as planned in the existing Circulation Element. On October 22, 2008, in conjunction with a contract amendment for Fehr & Peers, a tentative list of "Model-Results Circulation General Plan Amendments" was provided, based on the first run of the new traffic model. The list was refined after a second run of the model based on a detailed review and refinement of land use projection scenarios for the 2015 and 2030 model years, under both existing GP land uses and proposed GP amended land uses. The model results answered the Council's question of whether or not a Madrone Parkway Crossing is necessary: it is needed sometime after 2015 but before 2030, with timing largely influenced by the pace of development in the Coyote Valley Research Park area.

The refined list of "Model Results Network Amendments" was then incorporated into the Proposed Circulation Element General Plan Amendment. The City Council also directed that the TIA should also evaluate the following "Additional Possible Circulation General Plan Amendments", so that information could be developed in the EIR so that the Council could decide in the future whether or not to pursue these amendments: 1) Monterey Road Narrowing from 4 to 2 lanes from Main to Dunne; 2) shift of Walnut Grove North Extension to the west or eliminating that planned improvement from the Circulation Element; and 3) the possibility of not closing Depot at Dunne for a UPRR grade separation project. These were items that the City Council desired information about, but was undecided as to whether and when to make decisions about the projects.

Once the Travel Demand Forecasting Model & Future Improvements Study was complete and the proposed changes to the city's Circulation Element were defined, Fehr & Peers began work on a Transportation Impact Analysis (TIA) and the City hired David J. Powers & Associates to prepare an Environmental Impact Report (EIR) on the proposed General Plan Circulation Element Amendment. The City's Travel Demand Model was run under several Scenarios (described later in this memo), so that the TIA could present information related to appropriate comparisons of certain different Scenarios, in order to characterize the nature and significance of project and cumulative impacts. The EIR was structured to provide equivalent information about project impacts for both the Monterey at 4 lanes and at 2 lanes scenarios.

PLANNING PROCESS, INCLUDING COMMUNITY MEETINGS AND WORKSHOPS

Based on the City Council's direction, a Notice of Preparation of an EIR was released on February 6, 2009 in accordance with State law, to solicit agency and other input regarding the content of the EIR. The Draft EIR was released for a 45-day public review and comment period on August 4, 2009, which was initially set to end on September 17, 2009, but which was later noticed for a 15-day extension, such that a 60-day comment period was provided which ended at 5:00 PM on Friday, October 2, 2009.

After the Draft EIR was completed, a series of Community Meetings were held to explain the "Morgan Hill Travel Demand Forecasting Model and Future Improvements Study", the "General Plan Circulation Element Network and Policy Revisions Transportation Impact Analysis", the proposed "Circulation Element Update General Plan Amendment", and the findings of the Draft Environmental Impact Report for the proposed General Plan Circulation Element Update GPA. Other meetings and workshops were also held as listed below:

August 11 & 25, 2009	Planning Commission Workshop on Studies & Proposed Element
August 13, 2009	South Co Jt. Planning Advisory Committee on Studies & Element
August 29 & 31, Sept 3 & 30, 2009	Community Meetings on Studies, Proposed Element & Draft EIR
September 1, 2009	Planning Commission Workshop for comments on Draft EIR
September 15 & 22, 2009	Planning Commission Workshops on content/text of draft Element

The legal public notice of the February 9, 2010 Planning Commission public hearing on the proposed Circulation Element was published on January 29, 2010 in the Morgan Hill Times. Notices were also mailed the following week to persons who attended and signed-in at the Community Workshops, to persons who signed a petition submitted to the City during September 2009, and to mailing lists of agencies and members of the development community. Copies of the Final EIR Responses to Comments document, along with copies of the Final Draft Proposed Circulation Element which had been refined based on Planning Commission, public and agency comments and the findings of the EIR, were mailed on February 3 and 4, 2010 along with notices of both the Planning Commission's February 9th public hearing and the scheduled City Council February 24th public hearing.

SUMMARY OF FINDINGS OF TRANSPORTATION IMPACT ANALYSIS (TIA) AND DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) ON ROAD SEGMENTS, SIGNALIZED INTERSECTIONS, AND UNSIGNALIZED INTERSECTIONS

This section of the memorandum described in more detail the findings of the EIR for the various Scenarios that were evaluated in the EIR; the descriptions of the Scenarios are described on the following page of this memo and include but are not limited to Existing Conditions, Year 2030 under Current General Plan, Year 2030 Under Model-Recommended Circulation Network, Year 2030 with Model-Recommended AND Additional Amendments (e.g. Monterey Road Narrowing), and Year 2030

Cumulative Conditions with ALL Circulation Amendments and the known/filed Land Use General Plan Amendments (e.g. Downtown Specific Plan).

Impacts of Proposed Project: The significance of the proposed project impacts (the Circulation Element Update with the Model-Recommended Roadway Modifications) is evaluated by comparing operations under the Year 2030 Current General Plan Conditions (Scenario 4) to the Year 2030 Model-Recommended Roadway Conditions (Scenario 5), using the significance criteria in the city's adopted TIA Guidelines and LOS Policies for local streets, and using both VTA CMP and Caltrans significance criteria for US 101.

Cumulative Impacts: The significance of the cumulative impacts is evaluated by comparing Year 2030 Cumulative GPA Conditions (Scenario 8) to Existing Conditions (Scenario 1). Cumulatively considerable impacts are determined by comparing Year 2030 Cumulative GPA Conditions (Scenario 8) to Year 2030 Current General Plan (Scenario 4). [Certain of the below Scenarios 6 and 7 of the below Scenarios were most useful in the TIA prepared for the Downtown Specific Plan Master EIR, which provides information about both the Proposed Specific Plan, which would leave Monterey Avenue at 4 lanes, and the Project Alternate Specific Plan, which would involve a 2-lane Monterey Avenue from Main to Dunne.]

Scenario 1: Existing Conditions

Scenarios 2 & 3: Not Applicable for TIA Purposes - These were scenarios numbered by the consultants that were studied in Travel Demand Forecasting Model & Future Improvements Study

Scenario 4: Year 2030 Current General Plan Conditions - cumulative traffic volumes from projected land use development under the current General Plan, plus roadway improvements based on existing 2001 General Plan Circulation Element; LOS analysis based on Existing LOS Policy and current TIA Guidelines.

Scenario 5: Year 2030 Model-Recommended Roadway Conditions - Year 2030 land use from Scenario 4 (projected land use development by 2030 under current General Plan) plus funded and model-recommended roadway improvements under the *Proposed General Plan Circulation Element*. LOS analysis based on Existing LOS Policy and current TIA Guidelines.

Scenario 5A: Same as Scenario 5 but LOS analysis based on *Proposed Tiered LOS Policy*

Scenario 6: Year 2030 Model-Recommended and Additional General Plan Amendment Roadway Conditions – Year 2030 land use from Scenarios 4 & 5 (projected land use development by 2030 under current General Plan), plus Scenario 5 model-recommended roadway improvements under the Proposed General Plan Circulation Element, but with the *additional City-initiated possible roadway amendments: Narrowing Monterey Road to 2 lanes, removing the Dunne grade separation, shifting Walnut Grove Extension to the west, and not connecting San Pedro to Spring*. LOS analysis based on Existing LOS Policy and current TIA Guidelines.

Scenario 6A: Same as Scenario 6 but LOS analysis based on *Proposed Tiered LOS Policy*

Scenario 7: Year 2030 Cumulative with Model-Recommended Roadway Conditions – Year 2030 cumulative traffic volumes based on projected land use development by 2030, *including land use modifications that would occur under Proposed General Plan Land Use Amendments conditions*, which includes the proposed Downtown Specific Plan and several other land use amendment applications. Roadways are based on Scenario 5 model-recommended roadway improvements under the Proposed General Plan Circulation Element. LOS analysis based on Existing LOS Policy and current TIA Guidelines.

Scenario 7A: Same as Scenario 7 but LOS analysis based on *Proposed Tiered LOS Policy*

Scenario 8: Year 2030 Cumulative with Model-Recommended and General Plan Amendment Roadway Conditions – Land use from Scenario 7, reflecting uses under the Proposed General Plan Land Use Amendments, plus the Scenario 6 model-recommended road network and the *additional City-initiated possible roadway amendments: Narrowing Monterey Road to 2 lanes, removing the Dunne grade separation, shifting Walnut Grove Extension to the west, and not connecting San Pedro to Spring.* LOS analysis based on Existing LOS Policy and current TIA Guidelines.

Scenario 8A: Same as Scenario 8 but LOS analysis based on *Proposed Tiered LOS Policy*

Levels of service for roadway segments and intersections under the defined conditions of each of the relevant Scenarios, as well as the significance of impacts and availability of mitigation measures, is discussed in the following sections of this memorandum.

EXISTING CONDITIONS FALL 2007 (SCENARIO 1)

Level of Service (LOS) analysis for existing conditions shows that all roadway segments were operating at or above LOS D in Fall 2007, which met the city's standard for segments.

Measured against the city's existing LOS D+ standard, two signalized intersections operate at an unacceptable LOS D standard during one or both peak hours under existing (Fall 2007) conditions. It should be noted that these signalized intersections would both be considered acceptable under the proposed new LOS Policy:

Main Avenue/Monterey Road	(AM "D" and PM "D")	New Policy would allow "F"
Dunne Avenue/Butterfield Blvd	(PM "D")	New Policy would allow "E"

CURRENT GENERAL PLAN CONDITIONS 2030 (SCENARIO 4)

The 2001 General Plan Circulation Element describes the planned roadway network, which is also described in the Morgan Hill Travel Demand Forecasting Model & Future Improvements Study. Analysis of this Scenario included all of those planned roadway improvements, except for 1) the extension into the County of Butterfield Blvd from Tennant Avenue to Middle Avenue (Butterfield Extension South and overcrossing the UPRR tracks to connect to Watsonville Road was included); 2) construction of the Middle Avenue/US 101 freeway interchange; and 3) widening of Murphy Avenue from Dunne Avenue to Middle Avenue.

Measured against the existing LOS Policy, none of the roadway segments will operate at an unacceptable level under daily conditions, EXCEPT that Tennant Avenue would fall to LOS F, and it would need to be widened to a 6-lane arterial between Butterfield Blvd and US 101 SB Ramps by 2030 to operate acceptably. This is a feasible improvement and proposed in the new Circulation Element.

For analysis of signalized intersection operations in 2030, roadways were configured to reflect the planned improvements and widening in the 2001 General Plan. Measured against the current LOS D+ standard for signalized intersections, the Main Avenue/Monterey Road intersection would operate at an unacceptable LOS E+ and D, in the AM and PM peaks, respectively. It is not possible to widen this intersection due to existing downtown buildings. The proposed LOS Policy would exempt this intersection and therefore the intersection would operate acceptably under the new Policy.

Analysis of unsignalized intersections in 2030 showed that three intersections would operate below LOS D during both the AM and PM peak hours: Monterey/Central ("F" in both AM and PM peak hours), Monterey/Fourth ("F" in both AM and PM peaks hours) and Monterey/Fifth ("E" in AM peak and "F"

in PM peak hours). However, the results of peak-hour signal warrant analysis indicate that none of the intersections satisfy the peak hour warrant analysis. Under the city's adopted Guidelines, a significant impact is defined to occur when an approach (for two-way stop control) or the intersection (for all-way stop control) operates at LOS E or F and the peak hour signal warrant is met or exceeded under "with project" conditions. Therefore, these unsignalized intersection operations would be considered acceptable even under Existing LOS Policy, and would also be acceptable under the Proposed LOS Policy, which would exempt the Monterey/Fourth and Monterey/Fifth intersections from LOS standards and allow F.

MODEL-RECOMMENDED ROADWAY NETWORK CONFIGURATION

The Morgan Hill Travel Demand Model reflects certain roadway modifications also assumed to be constructed by 2030. The "Additional Possible Network Modifications" [*Narrowing Monterey Road to 2 lanes, removing the Dunne grade separation, shifting Walnut Grove Extension to the west, and not connecting San Pedro to Spring*] are NOT incorporated into the base traffic model.

The TIA assumed that the following model-recommended roadway modifications were implemented in Morgan Hill by 2015 ("first phase"):

1. Butterfield Boulevard extended as a 2-lane collector between Madrone Parkway & Cochrane Road
2. Butterfield Boulevard extended as 4-lane arterial between Tennant Avenue & Monterey Road
3. Hale/Santa Teresa Blvd extended as 2-lane Multi-Modal arterial between Main Ave & Spring Ave *(model results indicate that this facility could be provided after 2015)*
4. Fisher Avenue closed between Railroad Avenue & Butterfield Blvd Extension
5. DeWitt Avenue closed between Price Drive & Spring Avenue *(however whether this is actually closed is this is subject to final design and City Council direction)*
6. Walnut Grove extended north as a 2-lane collector between Dunne Avenue & Diana Avenue *(however the model results determined that this road is a local-serving road and not a citywide facility, therefore whether and when it gets built will be determined by the timing/nature of proposed development)*
7. Tennant Avenue widened as a 4-lane arterial between US 101 SB Ramps & Murphy Avenue
8. Freeway loop on-ramp constructed from eastbound Tennant Avenue to northbound US 101
9. Monterey Road widened to 4-lane arterial between Cochrane Road & Old Monterey/Llagas Creek Dr.
10. Llagas Creek Drive extended as a 2-lane collector between Hale Avenue & Monterey Road
11. Old Monterey Road realigned to intersect with Llagas Creek Drive Extension
12. Dunne Avenue widened to a 4-lane arterial between Monterey Road & Del Monte Avenue *(however the model results determined that only a 2-lane facility was needed, with the future prospect of providing 4 lanes only in the segment between Monterey Road and Del Monte Avenue)*
13. San Pedro Avenue realigned to intersect with Spring Avenue *(however, this is studied as a General Plan Circulation Element Amendment to NOT have it connected, which was determined to be acceptable)*

The Transportation Demand Forecasting and Future Improvements Study assumed that the following roadway modifications were implemented in Morgan Hill by 2030:

14. Madrone Parkway extended as a 2-lane arterial between Hale Road & Monterey Road
15. DeWitt Avenue realigned as a 2-lane arterial with Sunnyside Avenue

16. Mission View Drive extended as a 2-lane collector between Cochrane Road & Vista del Lomas Ave.
17. Mission View Drive upgraded to a 2-lane multi-modal arterial btwn Cochrane Road & Half Road
18. Murphy/Mission View Drive extended as a 2-lane multi-modal arterial btwn Half Rd. & Diana Ave.
19. Monterey Road widened to a 6-lane arterial between Burnett Road & Cochrane Road
20. Cochrane Road widened to a 6-lane arterial between Monterey Road & Mission View Drive
21. Main Avenue widened to a 4-lane arterial between Depot Street and Butterfield Boulevard *(however the model results determined that only a 2-lane facility was needed, except 4 lanes is needed between Butterfield Blvd and Depot Street)*
22. Watsonville Road widened to a 4-lane arterial between La Alameda and Monterey Road
23. Serene Drive extended as a 2-lane collector between Jarvis Drive & Central Avenue
24. Dunne Avenue grade-separated from Union Pacific RR tracks and Depot Street Closure at Fifth *(however, this is studied as a General Plan Circulation Element Amendment to NOT close Depot Street, and to instead either depress it to match the new grade of Dunne, or to re-route Depot through the CCC parking lot to connect with Church Street at the existing signalized intersection.)*
25. McKevly Lane extended as a 2-lane collector between West Edmundson Avenue & La Crosse Drive
26. Tennant Avenue widened to a 6-lane arterial between US 101 Ramps and Butterfield Boulevard
27. Hill Road/Peet Road extended as a 2-lane collector between Half Road & Main Avenue

[NOTE THAT THE ABOVE "2015" and "2030" PHASES WERE <u>ASSUMED</u> BY THE MODELING; THE <u>RESULTS</u> OF THE MODELING LED TO PROPOSALS TO AMEND PLANS FOR CERTAIN ROADWAYS, AND ALSO INDICATED THAT THERE IS SOME FLEXIBILITY FOR TIMING OF COMPLETION OF CERTAIN PLANNED IMPROVEMENTS]

2030 CONDITIONS UNDER CURRENT GENERAL PLAN WITH MODEL-RECOMMENDED ROADWAY NETWORK (SCENARIO 5)

The Morgan Hill Travel Demand Model was run based on projected land uses assumed to occur by 2030 under the Current General Plan with projected land use development per Morgan Hill and VTA/ABAG/ SCCS projections; and with the above roadway modifications also assumed to be constructed by 2030. Under projected 2030 conditions under the Current General Plan land use projections, all <u>road segments</u> operate at LOS "D" or better.

The model projects that in 2030 all <u>signalized intersections</u> will meet the Existing GP LOS Policy standard of "D+", with the exception of Main Avenue/Monterey Road, which is currently operating at "D" and is projected to fall to "E" in the AM Peak Hour (falling from E+ under the Current General Plan) and remain at "D" in the PM Peak Hour. This intersection has no feasible mitigation or improvement to achieve improved LOS, therefore this impact of the proposed project is considered significant and unavoidable. The Proposed LOS Policy Amendment would exempt this intersection.

Analysis of <u>unsignalized intersections</u> in 2030 showed that three intersections would operate below LOS D during both the AM and PM peak hours: Monterey/Central ("F" in both AM and PM peak hours), Monterey/Fourth ("F" in both AM and PM peaks hours) and Monterey/Fifth ("F" - falling from "E" under Current General Plan - in AM peak and "F" in PM peak hours). However, the results of peak-hour signal warrant analysis indicate that none of the intersections satisfy the peak hour warrant analysis. Under the city's adopted Guidelines, a significant impact is defined to occur when an approach (for two-way stop control) or the intersection (for all-way stop control) operates at LOS E or F

and the peak hour signal warrant is met or exceeded under "with project" conditions. Therefore, these unsignalized intersection operations would be considered acceptable even under Existing LOS Policy, and the impacts of the proposed project are considered less-than-significant. The service levels would also be acceptable and the impacts less-than-significant under the Proposed LOS Policy, which would exempt the Monterey/Fourth and Monterey/Fifth intersections from LOS standards and allow F.

The significance of the proposed project impacts (the Circulation Element Update with the Model-Recommended Roadway Modifications) is evaluated by comparing operations under the Year 2030 Current General Plan Conditions (Scenario 4) to the Year 2030 Model-Recommended Roadway Conditions (Scenario 5), using the significance criteria in the city's adopted TIA Guidelines and LOS Policies for local streets, and using both VTA CMP and Caltrans significance criteria for US 101.

2030 CUMULATIVE CONDITIONS WITH GENERAL PLAN LAND USE AMENDMENTS AND WITH MODEL-RECOMMENDED ROADWAY NETWORK AND WITH ADDITIONAL POSSIBLE NETWORK MODIFICATION (SCENARIO 8)

The Morgan Hill Travel Demand Model was run based on projected land uses assumed to occur by 2030 under the Current General Plan with projected land use development per Morgan Hill and VTA/ABAG/SCCS projections, *BUT* with all of the proposed General Plan Amendments (and Urban Service Area Boundary Amendments) in place. The Model incorporates the Model-Recommended Roadway Modifications to the current General Plan, and *ALSO* incorporates the four Additional Possible Network Modifications [*Narrowing Monterey Road to 2 lanes, removing the Dunne grade separation, shifting Walnut Grove Extension to the west, and not connecting San Pedro to Spring*], with all roadway modifications assumed to be constructed by 2030.

The most significant General Plan Amendment is the proposed Downtown Specific Plan, which would generally double development levels over levels projected under the existing Downtown Plan (i.e. rather than about 600 new dwelling units, about 1,200 new dwelling units would be projected to occur by 2030). The General Plan Amendment and Urban Service Area Boundary Amendment land use

Under projected 2030 conditions under all General Plan Land Use Amendments, including the Downtown Specific Plan, and all Circulation Amendments, including the possible Monterey Road Narrowing, all **road segments** operate at LOS "D" or better *except* the segment of Monterey Road between Main Avenue and Dunne Avenue (the blocks where the road would be narrowed from 4 lanes to 2 lanes). Under these conditions, the proposed lane reduction will cause some traffic to divert to parallel facilities, including the Hale/Santa Teresa Corridor and the Butterfield Boulevard Corridor. The model still shows a high level of use of Monterey Road; if drivers were to choose diversion levels beyond that projected by the model, there is substantial excess capacity available on both of those parallel facilities.

Under the Proposed LOS Policy, which is one of the proposed GPAs, and thus part of the Cumulative GPA Conditions, the Downtown Core would be exempted from the LOS policy, and thus the Monterey Road segment between Main Avenue and Dunne Avenue would operate acceptably, there would be no cumulative impacts, and no mitigation would be required.

The model projects that in 2030 four **signalized intersections** will not meet the Existing GP LOS Policy standard of "D+":

Main Avenue/Monterey Road	F in both AM and PM peak hours
Main Avenue/Butterfield Road	D in both AM and PM peak hours
Dunne Avenue/Monterey Road	D in PM peak hour
Dunne Avenue/Butterfield Road	D in PM peak hour

Under the Proposed LOS Policy, which is one of the proposed GPAs, and thus part of the Cumulative GPA Conditions, all of the above signalized intersections would operate acceptably, there would be no cumulative impacts, and no mitigation would be required.

Significance and Mitigations for Cumulative Impacts on Road Segments Intersections under Existing LOS Policy: The proposed General Plan Amendments would have a significant cumulative impact, which would also be considered cumulatively considerable, along Monterey Road between Main Avenue and Dunne Avenue. This impact is significant and unavoidable unless, as noted earlier, the City changes its LOS Policy to exempt Downtown, or the city retains the existing 4-lane configuration of Monterey Road through Downtown.

The model shows that additional capacity will be available in the parallel Santa Teresa/Hale and Butterfield Boulevard Corridors. However, many of the trips on Monterey Road will have origins and destinations in the downtown area. Either the LOS Policy Change or Maintaining 4 Lanes would be required to avoid an unmitigated cumulative impact, however, retaining the existing four-lane configuration would preclude widening of sidewalks, narrowing of pedestrian crossings, reducing vehicular travel through downtown, and enhancing the multi-modal-friendly environment.

It should be noted that city staff will be recommending to the Planning Commission and City Council that any decision on whether or not to narrow Monterey Road be deferred until after comprehensive streetscape alternatives planning occurs. The City has applied for grant funds to carry out such streetscape planning in FY 2009/10, and both four-lane and two-lane configurations would be studied with regard to use and design of the Monterey Road public right of way.

Significance and Mitigations for Cumulative Impacts on Signalized Intersections under Existing LOS Policy: Three signalized intersections would operate unacceptably under the Existing LOS Policy; each of these would operate acceptably under the Proposed LOS Policy.

The **Main Avenue/Monterey Road** signalized intersection is currently operating at "D". It falls to "E+" in the AM peak under the Current General Plan; falls to "E" in the AM peak hour under the Proposed Project Model-Recommended Network under Current General Plan Land Uses; and falls to "F" in both the AM and PM peak hours under the Cumulative GPA Land Use and Circulation Amendments (i.e. with Downtown Specific Plan and Monterey Road Narrowing and all other GPAs). Operations would be about 120 seconds of average delay in the AM peak and 80 seconds of average delay in PM peak.

The following improvements would mitigate the impact and improve the intersection operations to LOS D (39 seconds of average delay) in the AM peak and LOS C- (34 seconds of average delay) in the PM peak:

- Install protected east/west phasing with modifications to the eastbound approach (i.e. a left-turn lane and a shared-through right) and widen the westbound approach (i.e. separate left, through and right lane with an overlap).

- The southbound approach would need to be widened to include two southbound left-turn lanes, a through lane and a shared through-right lane. The northbound and southbound approaches would conflict with the potential narrowing of Monterey Road from four to two lanes between either Main Avenue and either 5th Street or Dunne Ave.

Due to the proximity of existing buildings, widening of Main Street is considered **infeasible**, and therefore Cumulative Impact is considered significant and unavoidable under the Existing LOS Policy.

The projected F operations show that during peak hours, extensive queues are expected to form and some additional traffic may be diverted from Monterey Road to parallel facilities including the Butterfield Boulevard Corridor and the Santa Teresa/Hale Corridor. During off-peak hours, however, operations are expected to be at least LOS D or better based on projected intersection delay and the amount of estimated daily traffic on Monterey Road.

Under the Proposed LOS Policy, which is one of the proposed GPAs, and thus part of the Cumulative GPA Conditions, the Main/Monterey signalized intersection would be allowed to operate at F, therefore there would be no cumulative impact, and no mitigation would be required.

The **Main Avenue/Butterfield Boulevard signalized intersection** is currently operating at "C-" in the AM peak and "D+" in the PM peak. It falls to "D+" in both the AM & PM peak hours under the Current General Plan; remains "D+" for both the AM & PM peak hours under the Proposed Project Model-Recommended Network under Current General Plan Land Uses; and falls to "D" in both the AM and PM peak hours under the Cumulative GPA Land Use and Circulation Amendments (i.e. with Downtown Specific Plan and Monterey Road Narrowing and all other GPAs). Operations would be about 39 seconds of average delay in both the AM and PM peaks.

The following improvements would mitigate the impact and improve the intersection operations to LOS D+ or better under Cumulative GPA Conditions:

- **Install a second northbound left-turn lane** *(may require right of way from the northwest and southeast corners of the intersection, but this is considered physically feasible)*

Under the Proposed LOS Policy, which is one of the proposed GPAs, and thus part of the Cumulative GPA Conditions, the Main/Butterfield signalized intersection would be allowed to operate at LOS E, and therefore the projected LOS D would mean that the intersection would operate acceptably, there would be no cumulative impact, and no mitigation would be required.

The **Dunne Avenue/Monterey Road signalized intersection** is currently operating at "C" in the AM peak and "D+" in the PM peak. It remains "C" in the AM and "D+" in the PM peak hours under the Current General Plan; and also remains "C" in the AM and "D+" in the PM peak hours under the Proposed Project Model-Recommended Network under Current General Plan Land Uses. LOS falls to "C-" in the AM peak hour and "D" in the PM peak hour under the Cumulative GPA Land Use and Circulation Amendments (i.e. with Downtown Specific Plan and Monterey Road Narrowing and all other GPAs). Operations would be about 48 seconds of average delay in the PM peak hour.

The following improvements would mitigate the impact and improve the intersection operations to LOS D+ or better under Cumulative GPA Conditions:

- **Install an eastbound right-turn overlap phase, and a southbound approach with a left-turn, through lane and shared through-right lane.**

Analysis of **unsignalized intersections** in 2030 showed that four intersections would operate below LOS D during both the AM and PM peak hours:

Monterey Road/Central Avenue	F in both AM and PM peak hours
Monterey Road/Fourth Street	F in both AM and PM peaks hours
Monterey Road/Fifth Street	F in both AM and PM peak hours
Dunne Avenue/Del Monte Avenue	E in AM peak hour & F in PM peak hour

The results of peak-hour signal warrant analysis indicate that only the Dunne Avenue/Del Monte intersection satisfies the peak hour warrant analysis.

Significance and Mitigations for Cumulative Impacts on Unsignalized Intersections under Existing LOS Policy:

The **Dunne Avenue/Del Monte Street unsignalized intersection** currently operating at "B" in the AM and PM peaks. It falls to "C" in the AM & PM peaks under the Current General Plan, stays "C" in the AM but fall to "D" in the PM peak hour under the Proposed Project Model-Recommended Network under Current General Plan Land Uses, and falls to "E" in the AM and "F" in the PM peak hour under the Cumulative GPA Land Use and Circulation Amendments (i.e. with Downtown Specific Plan and Monterey Road Narrowing and all other GPAs). Operations would be about 37 seconds of average approach delay in the AM peak hour and 74 seconds of average approach delay during the PM peak hour.

The following improvement would mitigate the impact and improve the intersection operations to LOS C (20.6 seconds of average delay) in the AM peak and LOS C+ (20.8 seconds of average delay) in the PM peak under Cumulative GPA conditions:

- **Install a traffic signal**

With incorporation of the above mitigation measure, all cumulative impacts are considered less-than-significant under the Existing LOS Policy.

Under the Proposed LOS Policy, which is one of the proposed GPAs, and thus part of the Cumulative GPA Conditions, the Dunne/Del Monte unsignalized intersection would be allowed to operate at LOS F, and therefore the projected LOS E and F would mean that the intersection would operate acceptably, there would be no cumulative impact, and no mitigation would be required.

US 101 FREEWAY LEVEL OF SERVICE, IMPACT AND MITIGATION ANALYSIS

Planned HOV Lane. The widening of US 101 to include a High Occupancy Vehicle (HOV) or "carpool" lane in each direction from Cochrane Road to Monterey Road in Gilroy is a VTA planned project included in the Valley Transportation Plan (VTP) 2030, a regional planning document for Santa Clara County. In the Morgan Hill traffic model, the recommended roadway improvement analysis for 2030 included this project, which will provide additional capacity in the South County US 101 corridor and encourage peak period carpooling. The South County Circulation Study also identified other desirable roadway improvements along the US 101 corridor such as ramp metering, auxiliary freeway lanes and High Occupancy Toll lanes (HOT lanes).

As discussed in the "Travel Demand Forecasting Model & Future Improvements Study", in order to assess the benefit of the planned US 101 HOV lanes on Morgan Hill local street circulation, Fehr & Peers conducted a sensitivity analysis by removing the HOV lane improvement from the future 2030 network and performing another model run. The results of this analysis showed that removal of the additional freeway capacity actually reduces traffic on the major east-west corridors that access the freeway through interchanges at Cochrane Road, Dunne Avenue and Tennant Avenue. The complement to this change in east/west travel patterns is that the reduced freeway capacity increases traffic on the north-south roadways parallel to US 101 -- such as on Hale/Santa Teresa, Monterey Road, Butterfield Boulevard, and Murphy/Mission View. However, the resulting LOS analysis of daily volumes shows that, while volumes would increase on these north-south roadways, the removal of the HOV lanes from

the freeway would not require the addition of any through capacity on the parallel Morgan Hill streets by 2030.

Level of Service (LOS) Standards and Mitigation of Freeway Impacts: VTA/CMP and Caltrans. Freeway segments were evaluated using daily volume thresholds, for this General Plan level of analysis (it is not possible to accurately project freeway density for a 2030 time horizon). The adopted Congestion Management Program (CMP), prepared by VTA, establishes a LOS E standard for CMP-monitored roadways, which includes US 101. It should be noted that Caltrans has accepted the adopted CMP TIA methodologies, and it is appropriate to use the adopted CMP standard as the threshold of significance for impacts to the freeways. It is also relevant to disclose, however, that Caltrans also states that it strives to maintain freeway facilities at the LOS C/D cusp per its *Guide for Preparation of Traffic Impact Studies* (December 2002), and the EIR also addresses significance under the Caltrans threshold for significance.

Existing Freeway LOS. Average Daily Traffic (ADT) and Level of Service (LOS) analysis of the 8 US 101 freeway northbound and southbound mainline segments between San Martin Avenue (south of Morgan Hill) and Coyote Creek Road (north of Morgan Hill) showed that the existing LOS is "E" for all of the 3-lane freeway segments in Morgan Hill, while it is "C" for northbound 101 and "D" for southbound 101 between Cochrane and Coyote Creek Road. Under the adopted CMP "E" standard, all freeway segments currently operate at acceptable levels of service, however under the Caltrans "C/D Cusp" standard, the "E" segments would be considered unacceptable.

Current General Plan 2030 Freeway Level of Service (Scenario 4). Under Year 2030 conditions US 101 is widened to include an HOV lane through Morgan Hill. LOS analysis shows that all southbound US 101 freeway segments and the northbound segment between Cochrane Road and Coyote Creek Road operate at an unacceptable LOS F, and the remaining 3 northbound freeway segments (all between San Martin Avenue and Cochrane Road) operate at LOS E. Measured against the Caltrans "C/D Cusp" standard, all freeway segments operate unacceptably, while measured against the adopted VTA CMP "E" standard, only the 5 segments that would operate at LOS F would be considered unacceptable. The TIA indicates that these unacceptable operations are projected to occur regardless of changes to the Morgan Hill future network and/or City LOS policies.

Year 2030 Model-Recommended Roadway Conditions (Scenario 5 "Proposed Project"). Analysis was based on projected land uses assumed to occur by 2030 under the Current General Plan (just as in Scenario 4 above, with projected land use development per Morgan Hill and VTA/ABAG/SCCS projections), BUT assuming the Model-Recommended Roadway Modifications also assumed to be constructed by 2030 (see the 2015 and 2030 list of improvements shown later in this memorandum).

The analysis shows that freeway volumes on northbound US 101 between Dunne Avenue and Cochrane Road *increase* by 2.5% northbound and by 1.3% southbound relative to current General Plan conditions. Freeway volumes between Dunne and Tennant *decrease* by 0.9% northbound and by 1.0% southbound. However, none of the mainline freeway segments actually change in term of Level of Service with implementation of the model-recommended network; LOS operations are as stated above for the Current General Plan.

Year 2030 <u>Cumulative</u> General Plan Amendment Conditions, including all General Plan Land Use Amendments and all Circulation Element Amendments (Scenario 8). Analysis was based on land uses under the Proposed General Plan Land Use Amendments, plus the model-recommended road network, plus the additional City-initiated possible roadway modifications. *[Narrowing Monterey Road to 2 lanes, removing the Dunne grade separation, shifting Walnut Grove Extension to the west, and not*

connecting San Pedro to Spring.] LOS analysis based on Existing LOS Policy and current TIA Guidelines, and LOS analysis also presented based on *Proposed GPA Tiered LOS Policy*

The LOS analysis shows that all southbound US 101 freeway segments and the northbound segment between Cochrane Road and Coyote Creek Road operate at an unacceptable LOS F, and the remaining 3 northbound freeway segments (all between San Martin Avenue and Cochrane Road) operate at LOS E. Measured against the Caltrans "C/D Cusp" standard, all freeway segments operate unacceptably, while measured against the adopted VTA CMP "E" standard, only the 5 segments that would operate at LOS F would be considered unacceptable. As previously noted, these levels of service are the same as would occur under the Current General Plan 2030 Conditions, and therefore the TIA indicates that these unacceptable operations are projected to occur regardless of changes to the Morgan Hill future network and/or City LOS policies.

Significance and Mitigation of Impacts of Proposed Project for US 101 Freeway. The significance of the proposed project (the Circulation Element Update with the Model-Recommended Roadway Modifications) on US 101 is evaluated by comparing freeway operations under the Year 2030 Current General Plan Conditions to the Year 2030 Model-Recommended Roadway Conditions.

The adopted VTA CMP significance criteria states that freeway segment impacts are determined to be "significant" when the addition of traffic from the proposed project causes: a) freeway segment operations to deteriorate from an acceptable level under Current General Plan Conditions to unacceptable level; OR b) an increase in volume of one percent (1%) in the capacity of a freeway segment that is already operating unacceptably under Current General Plan Conditions.

The Caltrans standard and significance criteria from the *Guide for the Preparation of Traffic Impact Studies* (December 2002) states that impacts on Caltrans freeway segments are determined to be "significant" when: a) freeway segment operations deteriorate from an acceptable level under Current General Plan Conditions to unacceptable level; OR b) any new trips are added to a facility already operating unacceptably under Current General Plan Conditions.

Based on the adopted VTA CMP significance criteria, the proposed project would have a significant impact on US 101 between Dunne Avenue and Cochrane Road in the southbound direction. The widening of US 101 to five (5) lanes, or the addition of an auxiliary lane in the southbound direction would mitigate the impact.

Based on the Caltrans significance criteria, the proposed project would have a significant impact on US 101 between San Martin Avenue and Tennant Avenue both northbound and southbound (1 segment each direction, located outside of the city limits); and also between Dunne Avenue and Coyote Creek Road both northbound and southbound (2 segments each direction, both within and outside of city limits). The widening of US 101 to five (5) lanes, or the addition of auxiliary lanes both southbound and northbound between Dunne Avenue and Cochrane Road would mitigate the impact.

Significance and Mitigation of Cumulative Impacts for US 101 Freeway. The cumulative impact criteria are identical to the Model-Recommended Roadway (proposed project) significance critera except Cumulative GPA impacts are compared to Existing Conditions. These cumulative projects are determined to be "cumulatively considerable" when the cumulative impact criteria are met between Year 2030 Cumulative GPA Conditions (Scenario 8) to Year 2030 Current General Plan Conditions (Scenario 4).

Based on the adopted VTA CMP significance criteria, (i.e. a one percent increase or more), and compared to *Existing Conditions*, the Year 2030 Cumulative GPA Conditions would have a *significant*

cumulative impact on US 101 at the following locations: between Cochrane Road and Coyote Creek Road in the northbound direction (1 segment), and between Coyote Creek Road and San Martin Avenue in the southbound direction (all 4 segments) as those 5 segments would operate at an unacceptable LOS F. Three of those US 101 segments are *cumulatively considerable* compared to *Current General Plan 2030 Conditions*: between Coyote Creek Road and Dunne Avenue southbound (2 segments), and between Tennant Avenue and San Martin Avenue southbound (1 segment).

The widening of US 101 to five (5) lanes would mitigate the cumulatively considerable impacts and the freeway would operate at LOS D. An alternative mitigation for the southbound segment between Cochrane Road and Dunne Avenue is the construction of an auxiliary lane between these interchanges.

Based on the Caltrans significance criteria, (i.e. any new trips on freeway segments operating at unacceptable levels of service), and compared to *Existing Conditions*, the Year 2030 Cumulative GPA Conditions would have a *significant cumulative impact* on US 101 on all US 101 northbound and southbound study segments between San Martin Avenue and Coyote Creek Road. Seven of those US 101 segments are *cumulatively considerable* compared to *Current General Plan 2030 Conditions*; only the southbound segment between Tennant Avenue and Dunne Avenue is not considered cumulatively considerable.

The widening of US 101 to five (5) lanes would mitigate the cumulatively considerable impacts and the freeway would operate at LOS D. An alternative mitigation for the southbound segment between Cochrane Road and Dunne Avenue is the construction of an auxiliary lane between these interchanges. Alternative US 101 northbound mitigation between Tennant Avenue and Cochrane Road is the construction of auxiliary lanes between adjacent interchanges.

No Feasible Mitigation for Significant Impacts to US 101 Freeway. Degradation of US 101 mainline operations to 2030 and beyond is caused by future growth within and outside Santa Clara County, as well as the addition of traffic from development from development of the City of Morgan Hill General Plan land uses. Already planned increases in land use and changes to regional travel patterns will contribute to unacceptable operations of the US 101 freeway.

It is not feasible for the City of Morgan Hill to itself implement the above measure(s) that would be required to mitigate the impacts to the freeway by implementing the above-identified improvement(s). The Valley Transportation Agency and Caltrans are the responsible agencies for planning for and implementing improvements within the US 101 corridor. A fair share contribution from the City of Morgan Hill toward freeway improvement costs would be an acceptable mitigation measure, however significant impacts are not reduced or eliminated until the freeway improvements are actually implemented. Additional sources would be needed to provide adequate funding, which can include State Transportation Improvement Program funds for projects identified in the *Valley Transportation Plan 2030*, impact fees from other jurisdictions, and/or a regional impact fee. No funding for the affected portions of US 101 is expected to receive state funding based on the 2008 *State Transportation Improvement Program*. The City has implemented an impact fee to develop some of the local Morgan Hill roadway improvements but does not have a funding strategy in place to contribute towards regional improvements, and there is no regional or state impact fee program established. City representatives do and will continue to work collaboratively with San Jose, Gilroy, Santa Clara County, counties to the south (ie. Monterey, San Benito and Merced Counties), the Valley Transportation Agency, and Caltrans to prepare and develop a funding strategy for South County freeway improvements. Payment of traffic impact fees or a fair share contribution would be expected to fulfill the City's obligations for mitigating regional traffic impacts; however, unless other funding sources such as a new regional impact fee, additional sales tax measures, contributions from other developers, or state funds are made available,

feasible freeway and regional improvements will not be implemented, and the impact of not meeting the Caltrans freeway LOS standard would remain significant and unavoidable.

DISCUSSION OF PLANNED GRADE SEPARATION PROJECTS

The existing Circulation Plan (Map 4 of the Circulation Element) provides for 2 future new grade-separated railroad crossings: at Dunne Avenue and Butterfield South Extension. Madrone Parkway Crossing had been planned for a 4-lane at-grade crossing.

The Transportation Demand Forecasting and Future Improvements Study reflects model-recommended grade separation crossings of the Union Pacific Railroad (UPRR) tracks at three locations: 1) Dunne Avenue Underpass, 2) Butterfield Boulevard South Extension Overpass, and 3) Madrone Parkway (assuming that any new crossing would need to be grade-separated, and likely an underpass). Existing at-grade crossings are assumed to remain at Tilton Avenue, Main Avenue, San Pedro Avenue and Tennant Avenue. The at-grade crossing at Central Avenue was closed several years ago.

The proposed Circulation Element Update confirmed that a Madrone Parkway Crossing between Monterey and Hale is a necessary improvement, but modifies the Circulation Plan to show a 2-lane grade-separated facility constructed after 2015 and before 2030. The proposed Element would also allow that as an alternate or interim improvement the City may pursue a 2-lane at-grade crossing in exchange for closing the existing 2-lane at-grade crossing at San Pedro.

The Transportation Studies did evaluate a possible Circulation Element Amendment to NOT plan to grade separate Dunne Avenue, so that Depot Street could remain connected to Dunne and retain its ability to provide access to the Caltrain Station and public parking lots, and as an alternative to Monterey Road through the downtown area. The Studies developed two alternatives that would allow the grade separation plan for Dunne Avenue to remain intact, but would also allow for continued connection of Depot to Dunne:

- Retain the existing configuration of Depot Street, which would require additional engineering and construction costs to depress this portion of Depot Street to meet the lowered grade of Dunne Avenue;

OR

- **Realign the southern end of Depot Street to intersect with Church Street at Dunne Avenue. This realignment would require re-configuration of the existing Community Center parking lot and possibly pedestrian improvements to improve crossing of the re-aligned Depot Street.**

City staff believes that the second approach above is the preferred mitigation measure to allow the Dunne grade separation project to remain the long-term plan, while also allowing for connection of Depot Street to Dunne Avenue. The City will work with the Public Utilities Commission and Union Pacific Railroad to determine the appropriate phasing of new grade crossings and grade separations.

EFFECTS OF SMART GROWTH AND SUSTAINABLE COMMUNITIES POLICIES

The TIA also includes a qualitative discussion of the likely effects of a "smart growth" and "sustainable communities" urban development pattern that reflects techniques to encourage walking, biking and transit use and reduce demand for vehicle travel, which also improves air quality. Development pattern variables such as density, diversity, design and destination (the "4D's") have an effect on Vehicle Miles Traveled (VMT), as summarized below:

- Density: Residential and non-residential development per acre. More dense development increases opportunities for serving an area with transit, for carpooling, etc. For example, doubling of neighborhood density would be expected to result in approximately a five percent (5%) reduction in VMT.
- Diversity: Mix of residential, retail, and employment land uses. For example, doubling the mix of land uses compared to the regional average increases opportunities for being able to walk to workplaces and shopping/service areas and so forth, and can result in a five percent (5%) reduction in VMT.
- Design: Connectivity and walkability of the transportation network. For example, doubling of the street connectivity and walkability compared to the regional average can result in a three percent (3%) reduction in VMT.
- Destination Accessibility: Location relative to the major regional attractions. For example, doubling of the destination accessibility compared to the regional average can reduce VMT up to twenty percent (20%).

The TIA points out that traditional travel demand models, such as the Morgan Hill Model, have limited sensitivity to the above factors, and thus vehicle trips (VT) and VMT can be overstated for areas with smart growth development patterns. If the factors of Density and Diversity are included, then a reduction in VT and VMT of ten percent (10%) would be expected in the Traffic Analysis Zones where these factors exist, such as Downtown. However, the TIA did not incorporate any reduction due to these factors, and therefore it represents a conservative analysis of traffic operations.

OTHER FINDINGS OF DRAFT ENVIRONMENTAL IMPACT REPORT

A summary of Impacts and Mitigation & Avoidance Measures for factors other than Transportation is provided in the Draft EIR. No changes to the Measures occurred as a result of the Responses and Comments Final EIR process. Mitigation and Avoidance Measures are identified which will reduce the following impacts to a Less Than Significant level, and these measures have been incorporated into the proposed Circulation Element: Noise and Vibration, Air Quality. While certain possible mitigation and avoidance measures were identified which could reduce the following impacts, it is not known whether these measures will in fact be imposed on future projects or implemented, and so these impacts are considered Significant and Unavoidable: Agricultural Resources at Project and Cumulative Level.

POLICY REASONS IN SUPPORT OF LOS POLICY AMENDMENT

Included in the Fehr & Peers consultant services contract was evaluation of the city's existing LOS Policy in the General Plan, and preparation of a recommendation for any modifications. On May 28, 2008 the Morgan Hill City Council considered a policy memo and decided to initiate a General Plan Amendment as recommended by Fehr & Peers and staff, to establish a "Tiered LOS Policy" which would a) change the general standard from "D+" to "D"; b) exempt the downtown and thus allow LOS "F" in the downtown, and c) identify certain facilities where LOS "E" would be considered acceptable. The policy discussion in the Fehr & Peers policy memo noted the following considerations in support of creating the Tiered LOS Policy:

(1) Santa Clara County has jurisdiction over unincorporated areas and most expressways and generally maintains an LOS D operating standard. Most of the cities and towns within Santa Clara County require LOS D or better for local roadway operations, with the exception of Gilroy which maintains an LOS C standard for all areas west of US 101 and LOS D for roadways east of the freeway. Therefore "D" is more consistent with regional standards.

(2) According to the VTA's *Congestion Management Program (CMP) 2007* report published in December 2007, the basic LOS standard for CMP facilities including US 101 is LOS E, while the operating goal is LOS D. Local jurisdictions are not required to conform to the LOS D goal.

(3) Since the policy is set for peak-hour conditions (during the height of the morning and evening commute periods), intersection operations will be better at all other times of the day and on weekends, except potentially near major retail centers and other use that generate their peak vehicle demand on Saturdays and/or Sundays. The benefit of this policy is that the majority of the intersections will not reach design capacity (e.g. LOS D, E or F) and will be able to accommodate added vehicular traffic. Another way to look at this policy is that by applying it on a peak-hour basis, intersections can be oversized for the other 18 to 22 hours of the day.

(4) Any intersection that exceeds the adopted policy thresholds requires improvements, primarily by adding capacity through new vehicle travel lanes, which can:

- use up valuable land;
- be expensive for the City to implement;
- cause secondary environmental impacts, especially if the widening encroaches onto riparian corridors;
- require substantial construction costs that can be a detriment to economic development; and/or
- widen roadway cross sections which worsens conditions for bicycle and pedestrian travel by increasing riders and walkers level of exposure to vehicles.

Therefore it is desirable to not "over improve" roadway facilities based on peak hour use levels, especially in downtown areas desired to be "pedestrian-friendly", and on routes that serve commute traffic where most use of the facilities would be "off-peak".

(5) The current LOS policy, by limiting congestion, reduces the incentive for Morgan Hill citizens to use non-automobile modes, such as transit, ridesharing, bicycling, and walking. Therefore, one could make the argument that the Existing LOS D+ Policy is actually somewhat in conflict with other General Plan goals and policies in the Circulation and other Elements including:

Circulation
Goal 1: A balanced, safe, and efficient circulation system for all segments of the community,
Goal 6: A safe and efficient transit system that reduces congestion by providing viable non-automotive modes of transportation,
Goal 8: Expanded pedestrian opportunities

Community Development
Goal 12: A visually attractive urban environment
Goal 13: A vibrant, identifiable downtown
Goal 18: Useful, accessible and high-quality park, recreation and trail facilities and programs
Goal 19: Coordinated urban and school development

Economic Development
Goal 1: A strong, stable and diverse economic base
Goal 2: Additional, adequate job opportunities for local residents

Open Space and Conservation
Goal 8: Preservation of city's historic identity

(6) The benefit of exempting the Downtown Core area (14 blocks) from the LOS standard, and thus allowing LOS F, is that the downtown can avoid intersection widening and thus maintain minimal intersection pedestrian crossing distances (including use of bulb-outs at corners), can achieve wider sidewalks, and have a more multi-modal- and human-friendly environment.

TRANSPORTATION CONSULTANTS (FEHR & PEERS) DISCUSSION OF FEASIBILITY OF ESTABLISHING A LOS F "FLOOR": ALTERNATE SUGGESTION TO USE V/C RATIO AND MICRO-SIMULATION WHEN THE CRITICAL V/C IS PROJECTED TO EXCEED 1.3 OR 30 PERCENT MORE THAN THE THEORETICAL CAPACITY

The level-of-service (LOS) method for signalized intersections approved by the City of Morgan Hill and VTA analyzes isolated intersection operations based on average control vehicular delay, as described in Chapter 16 of the *2000 Highway Capacity Manual* (*HCM*) published by the Transportation Research Board, with adjusted saturation flow rates to reflect conditions in Santa Clara County. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Control delay is the primary component of total delay for isolated intersections without over-saturated volume conditions (e.g., where the volume-to-capacity (V/C) ratio < 1.0).

When demand volumes exceed capacity, stop-and-go conditions result, and operations are designated as LOS F (i.e., control delay exceeds 80 seconds per vehicle). Under these conditions, the macroscopic equations provided by the HCM methods do not accurately capture the total delay of an intersection. In particular, the amount of calculated vehicle delay may not accurately replicate field observations. In addition, the total vehicle delay of an intersection includes control delay and geometric delay associated with the effects on intersection capacity of signal coordination, pedestrian signal phases, and queue interactions between adjacent intersections. To evaluate total vehicle delay requires a micro-simulation analysis, which is consistent with the HCM methods. However, simulation of over-saturated conditions will indicate that not all demand will be served during a specified period such as a peak hour.

In downtown Morgan Hill, the proposed Level of Service policy would allow a higher level of congestion and delay during peak hours at selected intersections. This approach would allow LOS F operations and would not require mitigation for vehicle impacts that would typically widen roadways, resulting in longer crossing distances for pedestrians and increased exposure of bicyclists to automobiles. This policy is intended to promote a more balanced, safe, and efficient circulation system for all travelers.

Although excessive delays are not projected in downtown Morgan Hill through 2030, the proposed policy would theoretically allow peak period congestion to increase without limits and could result in extended gridlock on Monterey Road between Main and Dunne Avenues at some point in the future. To ensure that the policy recognizes this possibility, the City could identify a threshold beyond which some vehicle capacity improvements would be required, while still allowing congestion to occur and minimizing impacts to non-automobile modes.

For the reasons described above, we do not recommend using vehicle delay at an LOS F intersection as the threshold for requiring evaluation of potential vehicle capacity improvements. Instead, we suggest using the V/C ratio and recommend use of micro-simulation when the critical V/C is projected to exceed 1.3 or 30 percent more than the theoretical capacity. Even though an analysis may be required and conducted, it is possible that improvements required to reduce the projected critical V/C to less than 1.3 may not be feasible.

THIS PAGE LEFT BLANK INTENTIONALLY

CITY OF MORGAN HILL

CITY OF MORGAN HILL
PLANNING COMMISSION POLICY

(Adopted by City Council May 28, 2008
AMENDED _____, 2010)

SUBJECT: **Guidelines for Preparation of Transportation Impact Reports**
DATE: **May 28, 2008 (*AMENDED _____, 2010*)**
PAGE: **1 OF 10**

I. INTRODUCTION

It is a primary goal of the City to provide a safe and efficient transportation system for the citizens of Morgan Hill. This is done pursuant to the policies of the General Plan and in conformance with the California Environmental Quality Act (CEQA). The intent of this policy is to provide a consistent approach for determining the need for a transportation impact analysis, its content and mitigation of transportation impacts for land use projects proposed within Morgan Hill. The primary objective of this policy is to provide:

- Guidance in determining if and when a transportation study is needed.
- Consistency and uniformity in the identification of transportation impacts generated by local land use proposals.
- Consistency and equity in the identification of measures to mitigate the transportation impacts generated by land use proposal.
- The necessary information to City staff, Planning Commission and City Council to make informed decisions regarding proposed development or change in General Plan land use designation.

II. WHEN A TRANSPORTATION STUDY IS NEEDED

A. Trip Generation Thresholds

The following criteria are to be used to determine when a transportation impact study is needed for a project. A transportation impact study will be required when a project does any one of the following:

1. Generates 100 or more net new peak hour* trips. Net new peak hour trips are defined as the number of trips generated by the proposed development minus trips generated by existing development on the project site. (This threshold is consistent with the Valley Transportation Authority (VTA) policy.)

2. Adds 50 to 99 net new peak hour* trips to the roadway system where nearby intersections are currently operating at LOS D+ or worse, or projected to operate

at LOS D+ or worse with traffic added by approved developments. Adjacent or nearby intersections are defined as intersections to which the proposed development or proposed land use change adds 10 or more vehicle peak hour trips per lane. Downtown intersections exempt from LOS policy are not included in this assessment.

3. Creates a transportation issue that City staff requests to have analyzed.

*see peak hour definition Section IV C.

Since some of the thresholds described above include specific numbers of trips added to any one intersection, a trip generation, distribution, and trip assignment analysis may be required to determine if a specific development project would require a full transportation impact analysis including warrant studies as appropriate.

B. Updating an Existing Transportation Impact Study

A transportation report for a project which has been approved may need to be updated when the amount or character of the project-generated traffic has substantially changed or when the project has not begun to the satisfaction of City staff after a period of 18 months. A substantial change would be defined as a change in the land use or size of the project producing an increase of more than 50 peak-hour trips.

III. CONTENT OF A TRANSPORTATION STUDY

Prior to initiation of any transportation impact analysis, the scope of the study, a site plan describing the site access and on-site circulation (vehicle, bicycle, and pedestrian), preliminary trip generation, trip distribution, and trip assignment assumptions must be submitted to the Department of Public Works for review. The Department of Public Works will provide a written response to this submittal outlining their approval of the assumptions and identifying any additional issues to be addressed in the analysis.

At a minimum, the following shall be included in a transportation impact study:

A. Description of the existing transportation system

The transportation impact study shall include a description of the existing transportation systems in the area impacted by the project. Consistent with the VTA guidelines, the description of the existing transportation system shall include a discussion of the following: roadway system, transit system, bicycle system, pedestrian facilities and any other facilities or planned facilities relevant to the project area.

B. Use and acknowledgement of existing studies and assumptions:

The study shall acknowledge and identify the use of other traffic reports completed for other projects within the same area. The use of existing traffic counts is encouraged unless the counts are more than 1-2 years old (one year for general street/intersection counts, 2 years for counts done on specialized uses). Mitigation and improvements proposed by other approved projects shall also be discussed within the report.

The study shall clearly identify all assumptions used within the report. The study shall give an explanation of all factors and considerations used in formulating each assumption. For example, a study of a retail development should identify the number of pass-by and diverted link trips, explain the source of these assumptions, and identify any differences from City or VTA guidelines.

C. Boundaries of the Transportation Impact Study

The boundaries of the transportation impact study shall be clearly identified and developed in consultation with City staff. The study shall identify geographical features and land uses in the vicinity of the site. The study area should include all intersections and freeway segments likely to be significantly impacted by the project. At a minimum, any intersection to which the proposed project adds more than 10 peak hour trips per lane per movement should be included in the analysis. Freeway segments should be selected for analysis per VTA guidelines. If the project is found to have a significant impact to an intersection or freeway segment at the study area boundary at the completion of the draft analysis, Department of Public Works staff shall be consulted to determine whether the boundaries need to be adjusted to include additional study locations.

D. Transportation Analysis Scenarios

The City is interested in the impacts of general plan updates and amendments and specific project entitlements (i.e., site plans, conditional use permits, subdivisions, rezoning, etc.) on the circulation system/network. The complexity and magnitude of the impacts of a project will normally dictate the scenarios necessary to analyze the project.

1. When only a General Plan amendment is being sought, the following scenarios are required to be studied:

    a) Existing Conditions - Existing traffic volumes and peak hour LOS for affected intersections.

    b) Future Year (2030) No GPA Conditions – Future year traffic volumes based on forecasts from the Citywide traffic model with the *current* GP designation. The current model uses 2030 as the planning horizon.

    c) Future Year (2030) Plus GPA Conditions - Future year traffic volumes based on forecasts from the Citywide traffic model with the *proposed* GP designation.

    d) Future Year (2030) Cumulative Conditions - Future year traffic volumes based on forecasts from the Citywide traffic model with the *proposed* GP designation plus all other pending amendments.

2. When a General Plan amendment is not proposed and a proposed project is seeking specific entitlements (i.e., site plan, conditional use permits, subdivision rezoning etc.) the following scenarios must be analyzed:

    a) Existing Conditions – Current year transportation volumes and peak hour LOS analysis of affected streets and intersections. This should also include a description of the existing roadways, existing bicycle and pedestrian facilities, and transit service

in the area (as required per the VTA guidelines).

b) Project Conditions – Background traffic volumes (existing volumes plus, as advised by traffic consultant and/or Community Development Director, the volumes from approved but not yet constructed or occupied development in the area) plus traffic from the proposed project. This scenario should also evaluate the effects of the proposed project on the bicycle, pedestrian, and transit facilities in the area.

c) Cumulative No Project Conditions-Existing volumes plus a per annum growth factor to the completion date of the proposed project, plus traffic from approved projects plus traffic from pending projects. The growth factor will be estimated by comparing projected regional traffic volumes on roadway segments from the City's travel demand forecasting model. Regional trips have origins and destinations outside Morgan Hill.

d) Cumulative Plus Project Conditions- Cumulative no project volumes plus traffic from the proposed project.

If the proposed project is expected to be phased, development and project impacts are identified under Project Conditions or Cumulative Plus Project Conditions, then an additional analysis must be conducted to determine when (which phase) proposed mitigation is required.

3. When a General Plan amendment is proposed in conjunction with other specific entitlements, scenarios 1 (b-d) and 2 (a-c) shall be analyzed.

E. Project alternative scenarios

Transportation studies for projects with multiple phases or uses should include a discussion on various project and mitigation alternatives. Possible alternatives should include a reduction in project size, elimination of various uses, variation in size uses and site plan alterations. City staff shall approve proposed alternative scenarios prior to their use in a transportation impact analysis. As an alternative to providing alternative project **scenarios, a table and discussion which indicates at what percentage of build out, various mitigations are needed to reduce project impacts to a less than significant level.**

F. Approved and pending project list

A list of approved and pending projects shall be obtained from the Community Development Department. A pending project is considered any project that is reasonably foreseeable. The list of approved and pending projects should be approved by City staff prior to the initiation of the transportation impact report. Trip assignments and any required mitigation measures from approved projects traffic analyses will be provided by City staff.

G. Early warning of intersections expected to fail over time

The study should identify any intersection affected by a project that may fall to a LOS E or F or lower over time due to future circumstances which are not directly related to a single project.

IV. TRANSPORTATION DATA

The following elements are a starting point in consideration of a transportation study:

A. Trip Generation

The latest edition of the Institute of Transportation Engineers' (ITE) TRIP GENERATION manual or San Diego Association of Government (SANDAG) traffic data should be used for trip generation forecasts. Local trip generation rates are also acceptable (and in some cases may be more desirable) if appropriate substantiation is provided to support them.

1. Trip Generation Rates –If ITE or SANDAG trip generation data is not available for a proposed use, approval of alternative data source is required by City staff prior to preparing the transportation impact study.

2. Pass-by Trips - Pass by trips shall only be considered for retail-oriented development. Pass by trips should be estimated and included in the analysis consistent with VTA guidelines. The number of pass-by trips should be estimated using allowable reductions presented in the VTA guidelines, using ITE information or by consulting with City staff. Pass-by trip reductions and assignment, shall be approved by City staff prior to initiation of the transportation impact study, and shall be clearly discussed in the report.

3. Internalized Trips – Some developments will capture trips due to the mixed-use nature of the project. Internalized trip estimates should be estimated using VTA guidelines, using ITE information, or by consulting with City staff. Internalized trip reductions must be submitted to City staff for approval prior to initiation of the transportation study.

4. Other Trip Reductions – Some proposed developments may qualify for a reduction in the net new number of trips due to rail or bus facilities near the project. Transportation Demand Management (TDM) programs could also be used to reduce the projected trip generation for a proposed development. The VTA provides guidelines for appropriate trip generation reductions.

B. Traffic Counts

Prior to field traffic counts, consult with the City to determine the level of detail (e.g., location, signal timing, travel speeds, tuning movements, etc.) required at each transportation count site.

Common rules for counting vehicular traffic volumes include but are not limited to:

- Vehicle counts should be conducted on Tuesdays, Wednesdays, or Thursdays during weeks not containing a holiday and conducted in favorable weather conditions.
- Vehicle counts should be conducted during the appropriate peak hours (see peak hour discussion below).
- Seasonal and weekend variations in transportation should also be considered where appropriate (i.e. recreational routes, tourist attractions, harvest season, etc.)
- Vehicle counts should be conducted between mid September and mid May, when

schools are in session. If counts are conducted during the summer months, appropriate adjustments should be made. City staff shall approve any proposed adjustments prior to their use in a transportation impact analysis.

- Vehicle classification counts may be necessary along major truck routes or near sites that generate large numbers of truck trips

C. Peak Hours

In general, most reports should include a peak-hour analysis during the morning (6-9 a.m.) and evening (4-7 p.m.) peak periods. Other peak hours (e.g., midday, weekend, holidays etc.) may also be required to determine the significance of the impacts generated by a project.

V. TRANSPORTATION IMPACT ANALYSIS

LOS Methods and Impact Significance Thresholds

A. Signalized Intersection –

- Should be analyzed consistent with VTA guidelines.
- Shall use LOS standards defined in General Plan Circulation Element for City-controlled intersections.
- Shall use jurisdiction-specific LOS standards for all other locations.
- Analysis of closely spaced or heavily congested intersections may require the use of micro-simulation to adequately analyze the operations of the intersection.
- Significant impacts should be identified based on VTA thresholds (currently defined as an increase in critical delay of 4 or more seconds and an increase in the critical V/C ratio of 0.01 or more)

B. Unsignalized Intersections –

- Should be analyzed using software based on Highway Capacity Manual (HCM) methodology.
- Peak-hour signal warrants shall be analyzed for unsignalized intersections.
- A significant impact is defined to occur when an approach (for two-way stop control) or the intersection (for all-way stop control) operates at LOS E or F and the peak hour signal warrant is met or exceeded under "with project" conditions.

C. Freeways -

- Should be analyzed per VTA guidelines; may include discussion of Caltrans views.
- Additional analysis may be required depending on the potential impact to a freeway segment or ramp (e.g., a merge and/or diverge analysis may be required). City staff should be consulted to determine the appropriate methodology.
- Significant impacts for freeway segments should be identified based on VTA thresholds (currently defined as either 1) degrading a segment's operation from LOS E or better to LOS F, or 2) an increase of 1% or more in the capacity of a segment that is already operating unacceptably.

D. Non-automobile Travel Modes-

- City staff should be consulted to determine the appropriate methods and significant impact criteria for non-auto travel modes.

VI MITIGATION MEASURES

A. General

The transportation report should provide the nexus between a project and the transportation impacts to the street system. The report should also establish the rough proportionality between the mitigation measures and the transportation impacts.

Any required mitigation measures must be included in the transportation impact analysis. The impact analysis must also identify any significant and unavoidable transportation impacts.

B. Signalized intersections

Mitigation measures at signalized intersections may include capacity enhancements through pavement re-striping, roadway widening, signal modifications (e.g., right-turn overlap); or a reduction in project trips. Measures should be designed to minimize or eliminate secondary impacts to non-automobile travel modes.

C. Un-signalized intersections

Mitigation measures at unsignalized intersections may include capacity enhancements through pavement re-striping, roadway widening, stop sign modifications, or traffic signal installation; or a reduction in project trips. The City will make the final determination on signal installations through the application of signal warrant data.

D. Freeways

Mitigation of freeway segment impacts usually requires an additional lane to increase capacity. However, mainline lane additions are typically beyond the scope and financial capacity of a single development. Alternative mitigation may include minor ramp modifications to increase capacity or address operational issues.

MINIMUM CONTENTS OF TRANSPORTATION REPORT

I. TABLE OF CONTENTS

A. List of Tables
B. List of Figures (Maps)
C. Technical Appendices

II. EXECUTIVE SUMMARY

III. INTRODUCTION

1. Description of the proposed project
2. Location of project
3. Description of existing data use
4. Boundaries of analysis
5. Site plan including all access
6. Land use and zoning
7. Phasing plan including proposed dates of project (phase) completion
8. Purpose of report analysis
9. List of key intersections/roadways included in evaluation.
10. Project alternative scenarios or table with % of project and required mitigation.

IV. TRANSPORTATION ANALYSIS

1. Clearly stated assumptions
2. Existing and projected transportation volumes (including turning movements) facility geometry (including storage lengths where appropriate), and transportation controls (figure)
3. Project trip generation including references (table)
4. Project generated trip distribution (figure)
5. Project generated trip assignment (figure)
6. LOS and warrant analysis-existing conditions, cumulative conditions, and full build out of general plan conditions with and without project.

V. CONCLUSION AND RECOMMENDATIONS

1. LOS and appropriate measures of effectiveness quantities of impacted facilities with and without mitigation measures.
2. Mitigations phasing plan including dates of proposed mitigation measures
3. Define responsibilities for implementing mitigation measures

VI. APPENDICES

1. Description of transportation data and how data was collected
2. Description of methodologies and assumptions used in analyses
3. Worksheets used in analysis (i.e., signal warrant, LOS calculation worksheets, transportation count information etc.)

CITY OF MORGAN HILL
LEVEL OF SERVICE (LOS) DEFINITIONS

(February 2010)

(City authorizes use of current industry standards as the currently exist or may be amended)

Signalized Intersection Level of Service Definitions

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0
B+	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 12.0
B		12.1 to 18.0
B-		18.1 to 20.0
C+	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 23.0
C		23.1 to 32.0
C-		32.1 to 35.0
D+	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 39.0
D		39.1 to 51.0
D-		51.1 to 55.0
E+	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	55.1 to 60.0
E		60.1 to 75.0
E-		75.1 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0

Sources: *Traffic Level of Service Analysis Guidelines*, VTA Congestion Management Program, June 2003; *Highway Capacity Manual*, Transportation Research Board, 2000.

Unsignalized Intersection Level of Service Definitions

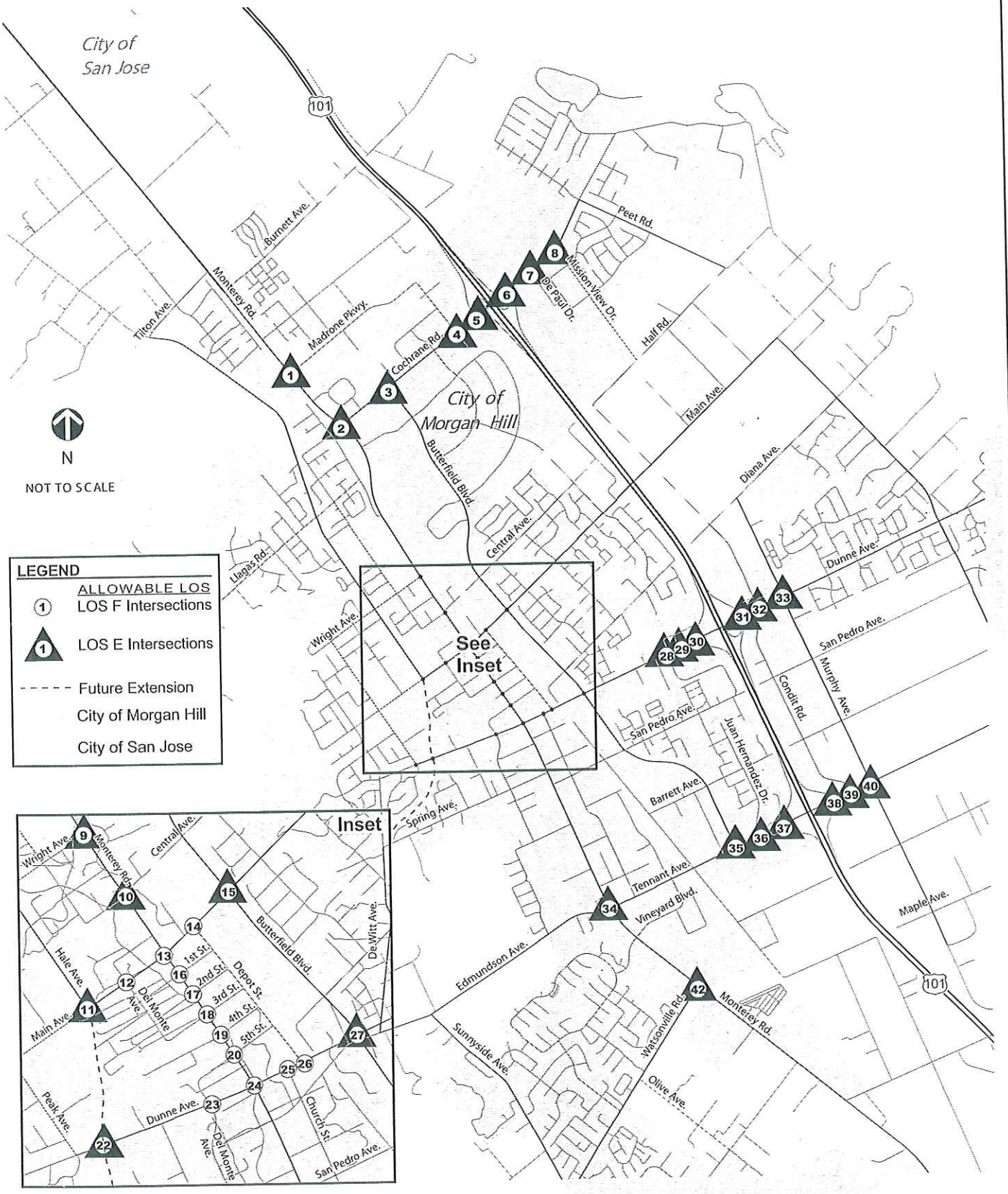
Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Little or no delay.	≤ 10.0
B	Short traffic delays.	10.1 to 15.0
C	Average traffic delays.	15.1 to 25.0
D	Long traffic delays.	25.1 to 35.0
E	Very long traffic delays.	35.1 to 50.0
F	Extreme traffic delays with intersection capacity exceeded.	> 50.0

Source: *Highway Capacity Manual*, Transportation Research Board, 2000.

Daily Two-Way Roadway Segment Level of Service Definitions

Roadway Type	Maximum Daily Volume (both directions except freeways)				
	LOS A	LOS B	LOS C	LOS D	LOS E
2-Lane Freeway[1]	11,100	20,100	28,800	35,700	40,100
2-Lane Freeway with Auxiliary Lane[1]	14,100	25,500	36,400	44,900	50,300
3-Lane Freeway[1]	17,000	30,800	44,000	54,100	60,600
3-Lane Freeway with Auxiliary Lane[1]	20,100	36,400	51,800	63,500	71,000
4-Lane Freeway1	23,200	42,000	59,500	72,800	81,400
4-Lane Freeway with Auxiliary Lane[1]	26,300	47,600	67,300	82,200	91,800
5-Lane Freeway[1]	32,800	53,700	75,500	91,700	102,300
2-Lane Highway	1,200	2,900	7,900	16,000	20,500
4-Lane Multilane Highway	21,400	35,200	50,600	65,600	73,000
6-Lane Multilane Highway	32,100	52,800	76,200	98,000	109,000
2-Lane Undivided Arterial[4]			9,100	16,700	17,700
2-Lane Divided Arterial[4]			9,700	17,600	18,700
3-Lane Arterial (2 in one direction)[4]			13,100	20,600	21,700
4-Lane Undivided Arterial[4]			17,500	27,400	28,900
4-Lane Divided Arterial[4]			19,200	35,400	37,400
5-Lane Divided Arterial (3 in one direction)[4]			22,600	44,300	46,700
6-Lane Divided Arterial[4]			27,100	53,200	56,000
8-Lane Divided Arterial[4]			37,200	71,100	74,700
1-Lane Ramp	5,000	7,500	10,500	13,000	15,000
2-Lane Rural Road	3,100	6,200	9,400	13,200	15,600
2-Lane Collector[5]	2,600	5,200	7,800	11,000	12,900
2-Lane Local Street[5]	1,900	3,900	5,800	8,200	9,600

Notes:
[1] LOS capacity thresholds based on one direction.
[2] The LOS capacity thresholds are based on HCM 2000 methodology and are generally appropriate for suburban and rural areas.
[3] Non-directional peak hour traffic volumes are assumed to be 10% of the daily traffic volume. Directional split is assumed 70/30. For 2-lane arterial and 4-lane undivided arterial a directional split of 60/40 is assumed. All volumes are approximate and assume ideal roadway characteristics.
[4] LOS A and B are not achievable for arterial roadways using the HCM 2000 methods.
[5] For local and collector roadway segments, the capacity limitation is related to neighborhood quality of life rather than the physical carrying capacity of the road. This assumes a standard suburban neighborhood, 40-foot roadway width, and 25 mile per hour speed limit with normal speed violation rates.
Source: Highway Capacity Manual, Transportation Research Board, 2000.



INTERSECTIONS WHERE LOS E AND F ALLOWED

FIGURE 2.0-2

THIS PAGE LEFT BLANK INTENTIONALLY

PROPOSED AMENDMENT Circulation

[2-3-2010 FINAL DRAFT PROPOSED – AS PRESENTED TO PLANNING COMMISSION]

The Circulation Element offers mechanisms for making Morgan Hill a safe and efficient place to travel, whether by train, bus, car, bike or foot. It contains goals, policies and actions aimed at making the existing road network more efficient and user-friendly, implementing strategies to ensure safe and appropriate operation of the transportation system, solving existing traffic and parking problems, and expanding transit and non-motorized travel opportunities.

Circulation Goals

1. A balanced, safe and efficient circulation system for all segments of the community, meeting local needs and accommodating projected regional and sub-regional traffic while protecting neighborhoods
2. Coordinated transportation planning efforts with local, regional, State and Federal agencies
3. A coordinated, continuous network of streets and roads
4. Emphasis on transportation improvements in the Butterfield, Hale/Santa Teresa, and Monterey corridors
5. Adequate off-street parking
6. A safe and efficient transit system that reduces congestion by providing viable non-automotive modes of transportation
7. A useable and comprehensive bikeway system that safely connects neighborhoods with workplaces and community destinations
8. Expanded pedestrian transportation opportunities
9. A circulation system based on Smart Growth and Sustainable Communities strategies; reflecting a balanced, safe, multi-modal transportation system, especially in Downtown where pedestrian, bicycle and transit facilities will be emphasized along with vehicular facilities.

Traffic and Transportation

Housing and job growth in Morgan Hill and the region is projected to cause vehicle trips to increase by approximately 50% in Morgan Hill by 2030 from 2007 base year levels. The roadway configurations in this Circulation Element are intended to accommodate projected travel demands in the year 2030, including local, sub-regional and regional traffic traveling through Morgan Hill. Congestion in Morgan Hill can be substantially affected by regional traffic if Highway 101 capacity does not meet demand, as regional travelers attempt to decrease travel times by using local roads. Prior to the 2003 completion of Highway 101 widening (from two to four lanes in each direction north of Cochrane Road, and from two to three lanes in each direction south of Cochrane Road), local Morgan Hill roads experienced substantial congestion from regional traffic, however congestion eased significantly after the widening. Morgan Hill arterial and major collector street roadways will continue to serve some level of regional and subregional travel demand into the future. However, substantial commuter traffic is anticipated to be accommodated by Highway 101, which is projected to widen to four lanes in each direction south of Cochrane by 2030, providing a full 8-lane configuration. Continued use of transit opportunities and transit capacity by regional commuters will also continue to accommodate some commuter travel. The traffic modeling completed for the 2010 Circulation Element Update maintained a similar split in 2030 between automobile and transit usage as 2007 base year existing conditions, but policies of this Element support efforts to facilitate increased use of alternate travel modes.

Planned Transportation System

The city transportation system is envisioned as a coordinated combination of public transit and private vehicles, with the majority of trips continuing to be made by private automobile. A key focus during the planning timeframe will be construction of new roadways and segments that will fill in "missing links" and provide for increased connectivity of the roadway system. Examples include but are not limited to completion of the missing Santa Teresa/Hale segments, completion of Butterfield South and Butterfield North road extensions, completion of the Murphy/Mission View Corridor, and construction of a Madrone Parkway Crossing as well as a Llagas Road Connection to link Hale/Santa Teresa to Monterey/Old Monterey. There will also be an increased emphasis on providing for choices in travel mode, particularly for pedestrian and bicycle travel within Morgan Hill.

In the past, Morgan Hill had considered 2-lane roads as collectors and 4-lane roads as arterials. In the 2010 Circulation Element Update, it was recognized that key north-south corridors functioned as arterials, and yet 4-lane capacity was not required. New 2-lane arterial classifications have been incorporated into the Circulation Plan. The "2-lane multi-modal arterial" configuration includes on-street bike lanes but also incorporates a Class 1 bikeway/pedestrian path within a linear park in the right-of-way. A "2-lane minor arterial" is also multi-modal but requires less right-of-way as bike lanes are only provided on-street and standard sidewalks are provided rather than in a linear parkway.

Policies in this element reflect existing public transportation service, support retention and expansion of CalTrain commuter service in the South County, and encourage other alternative transportation modes. Expanded express bus service to employment centers and the CalTrain station will be encouraged, and new bicycle and pedestrian facilities are encouraged. While some double-tracking of the light rail corridor and expanded service is planned, extension of light rail service to Morgan Hill is not included in the 2035 Valley Transportation Plan.

As of February 2009 the California High Speed Rail (HSR) Authority is planning the location of a High Speed Rail line, which is intended to serve inter-regional travel rather than local inter-city travel. If it is implemented, it is anticipated that the line through Morgan Hill would be located primarily east of Highway 101, although an alignment on or near the existing UPRR alignment is also being studied. It is anticipated that a HSR station would be located in Gilroy and not in Morgan Hill. Timing of implementation of the segment that includes South County is uncertain, and it is also unknown whether the line would be at grade or elevated/grade-separated from existing and planned local roadways.

Travel forecasts show that substantial roadway improvements will be required in Morgan Hill, to provide for both connectivity and capacity. The local road network will need to be improved to handle increases in both regional travel passing through Morgan Hill and local traffic generated within the city. The city's LOS policies are designed to reduce the incentive for regional travel to be drawn off the freeway and onto local streets, protect neighborhoods, promote a vital downtown, and focus transportation expenditures on priority improvements offering high performance value. The Tiered LOS Policy, along with completion of planned roadway improvements, are designed to ensure that traffic does not spillover into residential neighborhoods onto streets which are not designed to accommodate sub-regional and regional traffic, as such spillover would create safety and livability issues for local residents. The planned roadway system will appropriately accommodate all travel demands and will avoid spillover traffic in neighborhoods.

The number of lanes on Highway 101 will have a substantial effect on the needed width of local roadways in Morgan Hill. If the capacity of Highway 101 is not increased to meet the demand generated by increased regional traffic, more vehicles will divert off of the freeway, resulting in congestion on local roads. Traffic modeling with Highway 101 at 8 lanes indicates that this effect is not anticipated to the extent that congestion would exceed the city's applicable Tiered Level of Service standards.

This Circulation Element encourages the widening of Highway 101 to the extent needed to meet forecasted future demand. However, possible right-of-way constraints may result in 10 lanes being the maximum width of Highway 101, and only 8 lanes are assumed to exist by 2030 (2 HOV lanes are assumed to be added to 6 lane freeway). The direct financial cost, the environmental impacts, and the cost of environmental mitigation measures may make the widening of Highway 101 beyond 8 lanes difficult. Therefore, right-of-way for the city roadway system is based on the assumption that Highway 101 will be 8 lanes wide through Morgan Hill by the 2030 planning timeframe. City road improvements would initially be constructed assuming Highway 101 would be 8 lanes wide in 2030. Design of certain multi-modal arterials will accommodate the possibility of future widening in the event that Highway 101 is not widened to 8 or 10 lanes, and to accommodate road capacities that may be determined to be needed in the years beyond 2030.

Major features of the future circulation system are shown on *Map 4 and* summarized below.

North-South Roadways. The following is a summary description of major north-south roadways.

Highway 101. This Circulation Element encourages the widening of Highway 101 through Morgan Hill to the extent needed to meet future demand. For 2030 an 8-lane freeway is assumed.

Monterey Road. The Circulation Plan shows Monterey Road as a four lane arterial, except that between a point just north of Cochrane Road and the city limits it is planned to be widened to six lanes (beginning where one southbound lane becomes an eastbound left-turn lane). The existing segment of Monterey Road that is only 3 lanes as it passes under the railroad corridor is planned to be widened to 4 lanes.

This Circulation Element also provides the option for the City of Morgan Hill to decide to narrow Monterey Road from its existing 4 lanes to a 2-lane arterial through Downtown, as the Master EIR for the Downtown Specific Plan and the EIR prepared for the 2010 Circulation Element Update contain information about LOS conditions under both scenarios. In 2010/2011 the City plans to carry out a streetscape design alternatives planning process, which will consider both the 4-lane and 2-lane configurations prior to any City Council decision about number of lanes and allocation of the right of way to purposes such as vehicular lanes, bicycle lanes, widened sidewalks, on-street parking, median, bus turnouts and shelters, landscaping, and gateway entrances.

Butterfield Boulevard. As of 2010, Butterfield Boulevard extends from Cochrane Road to Tennant Avenue. North of Cochrane Road, it is planned to be a 2-lane arterial that connects to Madrone Parkway. South of Cochrane Road, it is envisioned as a 4-lane arterial with no on-street parking, with a grade-separated overcrossing of the railroad tracks at the south end to connect with Watsonville Road. In the segment between Cochrane and Tennant, the arterial exists in a 4-lane multi-modal configuration, with a separated Class 1 bikeway and pedestrian path. This segment has sufficient right of way to enable a future 6-lane configuration, if needed.. While not analyzed or included in the Circulation Plan for 2030, future consideration should be given to extending Butterfield north of Madrone to connect to Burnett Avenue, perhaps then turning west to connect to Tilton Avenue.

Hale/Santa Teresa Corridor. The Hale/Santa Teresa Corridor, which includes Santa Teresa Boulevard, Sunnyside Avenue, DeWitt Avenue, and Hale Avenue, is envisioned as a single continuous route. New segments and improvements within Morgan Hill are planned as a 2-lane multi-modal arterial, with a separated Class 1 bikeway and pedestrian path in a linear parkway. The 2-lane multi-modal segments would have sufficient right of way to enable a future 4-lane configuration, if needed. The City will work the County of Santa Clara to seek funding to improve the existing segments within the County to better accommodate bicyclists and pedestrians. .

Murphy Avenue/Mission View Drive Corridor. Murphy Avenue exists south of Diana Avenue. This Circulation Element plans for a northern extension of Murphy Avenue to connect

with Mission View Drive, and designates the Murphy/Mission View Corridor as a 2-lane arterial. While not analyzed or included in the Circulation Plan for 2030, future consideration should be given to extending Mission View Drive north to connect to Burnett Avenue.

Hill/Peet Road Corridor. Hill Road exists between East Main Avenue and Maple Avenue. This Circulation Element encourages the northern extension of Hill Road to connect with Peet Road, and designates the Hill Road Corridor as a 2-lane minor arterial.

Condit Road. This Circulation Element designates Condit Road as a 2-lane major collector.

East-West Roadways. The following is a summary description of major east-west roadways.

Cochrane Road. This Circulation Element designates Cochrane Road as a 6-lane major arterial with no on-street parking from Monterey Road east across Highway 101 to Mission View Road, with four lanes from there east to Peet Road.

Edmundson Avenue. This Circulation Element designates Edmundson Avenue as a 4-lane arterial from Monterey Road to the Piazza Way.

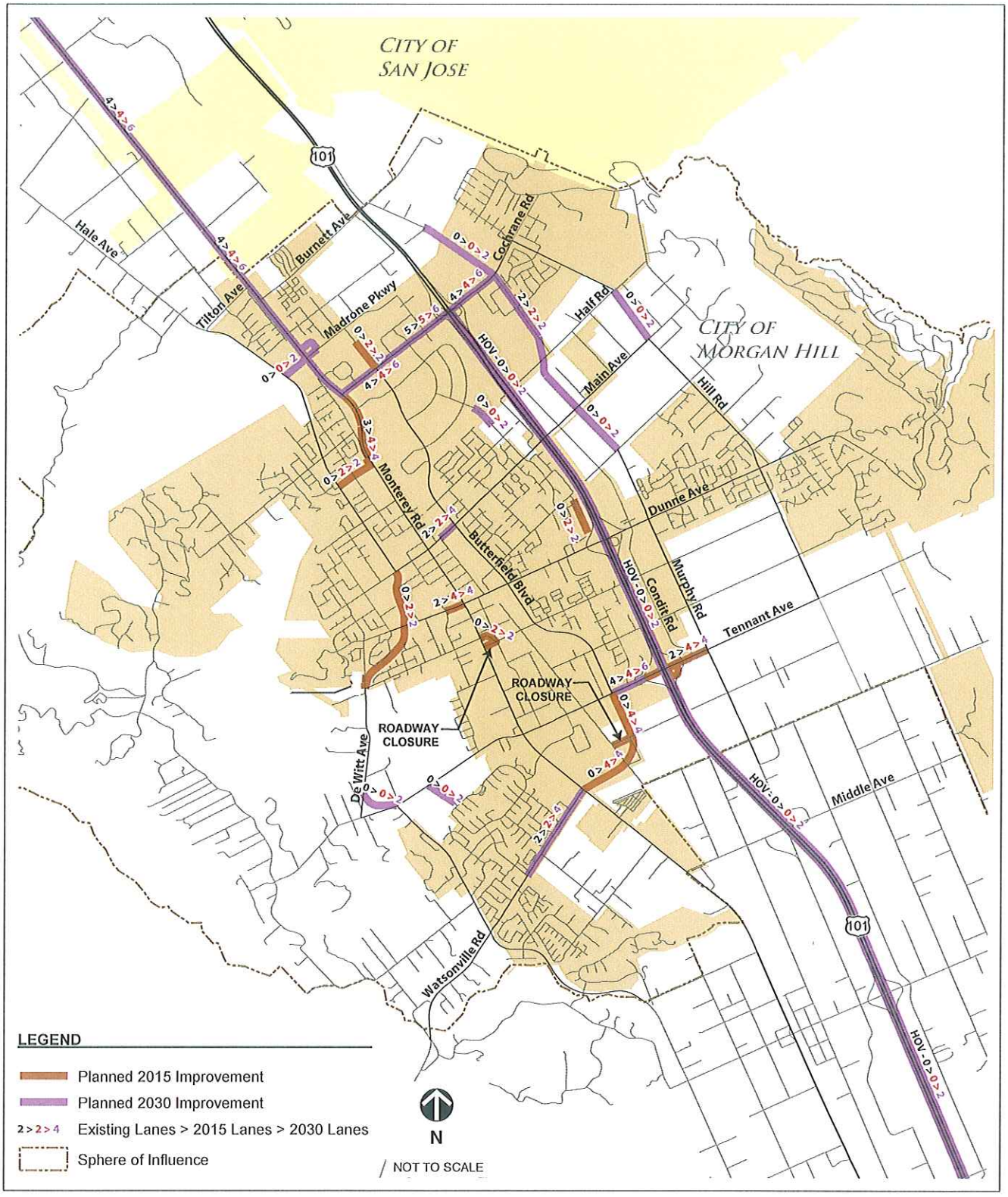
Madrone Parkway. This Circulation Element designates Madrone Parkway as a 2-lane minor arterial from Hale Avenue to Butterfield Blvd. In the long term, it is planned to be grade-separated from the Union Pacific Railroad tracks, however as an alternate or interim improvement the City may pursue a 2-lane at-grade crossing in exchange for closing the existing 2-lane at-grade crossing at San Pedro.

Main Avenue. This Circulation Element designates Main Avenue as a 2-lane arterial from Hale Avenue to Hill Road, except that it is planned for 4 lanes between Depot Street and Butterfield Boulevard.

Dunne Avenue. This Circulation Element designates Dunne Avenue as a 4-lane major arterial, except that it is a 2-lane arterial between Del Monte Avenue and Peak Avenue.

Tennant Avenue. This Circulation Element designates Tennant Avenue as 6-lane major arterial between US 101 ramps and Butterfield, and a 4-lane major arterial from Juan Hernandez to Monterey Road and from US 101 ramps to Hill Road.

Watsonville Road. This Circulation Element designates Watsonville Road as a 4-lane arterial from its connection with Butterfield Boulevard, over Monterey Road to La Alameda, and a 2-lane arterial thereafter.



FEHR & PEERS
TRANSPORTATION CONSULTANTS

N:\2007Projects\SJ_Projects\SJ07_989\GIS\Final_4_09\MXD\F5_2030DeltaLanes.mxd

RECOMMENDED ROADWAY IMPROVEMENTS AND REQUIRED NUMBER OF LANES

FIGURE ES-1

THIS PAGE LEFT BLANK INTENTIONALLY

Level of Service

Level of Service (LOS) is a way of measuring how well a road is operating, based average control delay per vehicle, and in some analyses based on the ratio of the volume of traffic to the capacity of the road . LOS A is a free flowing condition and LOS F is extreme congestion, with traffic volumes at or over capacity.

The planned city circulation system is designed to operate at LOS D for most intersections and roadway segments, except that in the Downtown LOS F is acceptable, and LOS E is acceptable for certain intersections, freeway ramps/zones, and segments as identified in this Circulation Element. Definitions of the LOS levels that are used by Morgan Hill are the current "industry standards" used by transportation engineers, as they currently or may later be defined. The definitions in use are contained within the city's "Guidelines for Preparation of Transportation Impact Analyses".

Goal 1: A balanced, safe and efficient circulation system for all segments of the community

Policies

1a. Plan, construct and maintain a coordinated and efficient system of local streets and highways throughout the community, meeting local needs and accommodating projected regional and sub-regional traffic while protecting neighborhoods.

1b. Plan for roadway system right-of-way based on the assumption that Highway 101 will be 8-lanes wide through the city by 2030.

1c. Provide a balanced transportation system which assures access to all, and which integrates all appropriate modes of transportation into an effectively functioning system, including such modes as auto, ride sharing, public rail and bus transit, bicycling and walking. (SCJAP 11.00 & 11.01)

1d. Ensure compatibility of the transportation system with existing and proposed land uses, promoting environmental objectives such as safe and uncongested neighborhoods, a pedestrian-friendly vibrant downtown that emphasizes non-auto transportation modes, energy conservation, reduction of air and noise pollution, and the integrity of scenic and/or hillside areas. (SCJAP 11.02)

1e. Implement strategies to ensure safe and appropriate operation of all components of the transportation system, such as programs to lower crash rates and reduce the number of transportation-related injuries in the city through education, enforcement, engineering strategies, physical improvements, and operational systems. Prioritize strategies that improve safety for students, pedestrians and bicyclists.

Action

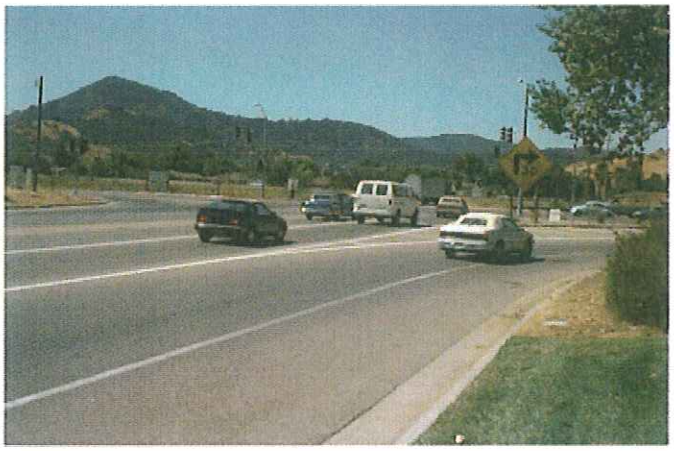
1.1 Develop techniques for ensuring that right-of-way for local roads is available at appropriate times and locations to accommodate traffic conditions associated with an 8-lane configuration for Highway 101.

Goal 2: Coordinated transportation planning efforts with local, regional, State and Federal agencies

Policies

2a. Work with the County, VTA and Caltrans to maintain a long-range coordinated regional transportation system, using highways, commuter rail systems, High Occupancy Vehicle (HOV) lanes on freeways, ramp metering, and other strategies.

2b. Work with the County and other agencies to plan and develop an effective sub-regional long-range transportation system to link Morgan Hill with areas to the north and south without promoting congestion, particularly along Butterfield Boulevard and Santa Teresa Boulevard. Congestion on Monterey Road in Downtown Morgan Hill will be tolerated in order to promote a pedestrian-friendly character and favor transit-oriented development.



2c. Work with the Santa Clara County Valley Transportation Authority (VTA) toward relieving congestion in the city by improving access to the freeway.

2d. Work with VTA and Caltrans to ensure widening of Highway 101 to 8 lanes by 2030 to accommodate expected traffic volume, and to plan for and implement appropriate strategies such as ramp metering, speed harmonization, tolling, using available transit and carpool lane capacity, High Occupancy Toll Lanes, or other strategies. Consider encouraging VTA and Caltrans to plan for 10-lanes as appropriate to accommodate future traffic volume beyond 2030.

2e. Integrate planning for land use and transportation development by insuring that the timing, amount, and location of urban development is consistent with the development of the transportation system capacity, and that land uses are designed to promote use of appropriate transportation modes. (SCJAP 11.05)

Actions

2.1 Support the VTA Long Term Transportation Planning efforts and actions.

2.2 In cooperation with the County, work with the Association of Bay Area Governments, the Metropolitan Transportation Commission, VTA, Caltrans, and the U.S. Department of Transportation to implement regional transportation plans.

2.3 Work with the VTA to develop a Transit Management Plan addressing multiple transportation modes as a means of reducing vehicle trips during peak traffic hours.

2.4 Ensure that the city's transportation model is kept up to date to reflect development as it occurs, and schedule Morgan Hill traffic model updates in conjunction with General Plan Updates and/or to coincide with or incorporate VTA model updates. Approximately every 5 years, strive to update the model with updated land use and circulation network projections, and to complete a comprehensive Future Improvements Transportation Study to identify whether amendments to the Circulation Plan are warranted, and to provide information about the priority and timing of needed transportation improvements.

2.5 Improve coordination and cooperation between the South County Cities and the County on all South County transportation planning. (SCJAP 11.07)

2.6 Conduct a study to identify techniques to accomplish the following objectives and incorporate the techniques identified in the study into approvals for future private development and Capital Improvement Planning.

1. Provide traffic calming on City streets as may be needed to enhance safety.
2. Move traffic with destinations outside of Morgan Hill to Highway 101 efficiently on major and minor arterial streets, minimizing impacts on local neighborhood streets.
3. Implement strategies to encourage regional commuter traffic to use Highway 101 for access to areas outside of Morgan Hill and to avoid using Morgan Hilllocal streets for the purpose of commuting between the south and the north of Morgan Hill.

4. Pursue grants and other funding opportunities to install sidewalks, bike lanes, and/or bicycle-pedestrian paths or lanes where such improvements do not presently exist in developed areas and along arterial streets.

Goal 3: A coordinated, continuous network of streets and roads

Policies

3a. Achieve and maintain an equitable, full-cost recovery funding and capital expenditure system to ensure that roadways are constructed or improved when needed. Use a variety of sources to ensure sufficient funding for roadways, including but not limited to impact fees, redevelopment funds, grants, and revenues from federal and state sources. Ensure eligibility of arterials and collectors for state and federal funding by updating the California Road System and other lists as appropriate.

3b. Avoid creating incomplete public improvements that create public safety hazards.

3c. Require developers to provide for the construction of their portions of arterial and collector streets at the time of development.

3d. As the Level of Service (LOS) Policy and design criteria for roadway improvements, use a Tiered LOS Standard as follows:

- LOS F in the Downtown (all intersections and segments involving streets including and bounded by Del Monte Street, Main Avenue, Depot Street and Dunne Avenue); and
- LOS D for intersections and segments elsewhere; except
- Allow LOS E for identified freeway ramps, road segments and intersections that (1) provide a transition to and are located on the periphery of downtown; (2) are freeway access zones; and/or (3) where achieving LOS D would involve unacceptable impacts on existing buildings or existing or planned transportation facilities including roads, sidewalks, bicycle and transit facilities; or would involve extraordinary costs to acquire land and existing buildings and build the improvement in relation to benefits achieved; or the facility would be widened beyond requirements to serve local traffic, in that the facility accommodates a significant component of peak hour sub-regional and regional through traffic. In order to reduce the incentive for regional travel to be drawn off the freeway and onto local streets, protect neighborhoods, and to create an incentive for using alternate modes of travel, LOS E during peak hours of travel is acceptable for the following identified freeway ramps, road segments and intersections:

[Note that the transportation modeling completed for the 2010 Circulation Element Update indicates that LOS E is not projected to actually occur in the 2030 timeframe analyzed, but LOS E will be considered acceptable in future traffic studies prepared for future proposed developments: LOS E will not be considered a significant impact, traffic studies will not need to identify improvement(s) that would improve LOS to D, and development projects will not need to mitigate their share of the impacts on these intersections. The City may elect to pursue improvement projects at certain intersections, but developers and the City would not be required to do so, and thus EIRs would not be required for future development projects that involve impacts to intersections where no improvement is possible and the impacts cannot be mitigated to LOS D. Findings made in conjunction with certification of the Final EIR prepared for the 2010 Circulation Element Update has provided the CEQA clearance for the below-identified ramps, road segments and intersections to operate at LOS E in the future.]

- Cochrane Road and Monterey Road
- Monterey Road and Wright Road
- Monterey Road and Central Avenue
- Hale/Santa Teresa and West Main Avenue
- Santa Teresa and West Dunne Avenue
- Butterfield Boulevard and East Main Avenue
- Butterfield Boulevard and East Dunne Avenue
- Madrone Parkway and Monterey Road
- Tennant Avenue and Monterey Road
- Tennant Avenue and Butterfield Boulevard
- Watsonville Road/Butterfield Boulevard and Monterey Road

- Cochrane Road Freeway Access Zone including from Madrone Parkway/Cochrane Plaza to Cochrane/Mission View Drive
- Dunne Avenue Freeway Access Zone including from Walnut Grove/East Dunne to Murphy/East Dunne Avenue
- Tennant Avenue Freeway Access Zone including from Juan Hernandez/Tennant to Murphy/Tennant
- Freeway Ramps.

3e. To the maximum extent possible, fund those road improvements that are required to correct existing deficiencies from general road fund revenues redevelopment tax increment funds, and grant sources that may be available.

3f. Require the following streets to be built to arterial standards in the locations and at the number of lanes shown on the Circulation Element Map, and encourage the County to improve county arterial roadways to appropriate arterial standards in unincorporated areas. As described by the "Planned Transportation System (2030)" description of the major planned roads in this Circulation Element, the nature of the arterials will range from a 2-lane minor arterial, 2-lane major arterial, 2-lane multi-modal arterial, 4-lane or 6-lane major arterial, and 4-lane multi-modal arterial.

3g. As a good practice measure to support pedestrian safety and promote safe vehicular travel, the City should carry out regular monitoring of the unsignalized intersections in the Downtown area, especially those at Monterey/Fifth, Monterey/Fourth, and Monterey/Central, to evaluate the possibility of restricting cross traffic movements or implementing other restrictions supportive of safe travel downtown.

3h. The City should evaluate the traffic lights and controls at the Main/Monterey intersection, and study not allowing left turns from Main to Monterey and to parking lots in either direction during peak hours or all hours, and implement as feasible.

3i. The City, Redevelopment Agency and property owners of the existing banks on the southwest and southeast corners of the Main/Monterey intersection should work together to explore the feasibility of redevelopment of those properties in a manner that would allow for road and operational improvements to improve traffic flow at that key intersection.

3j. In order to provide a continous north-south travel route to, from and within Downtown, the City should re-route Depot Street south through the existing Community and Cultural Center parking lot to connect to Church Street, and should explore the feasibility of extending Depot Street north to curve over and connect to McGlaughlin through to Central Avenue.

North/South Arterial Roadways

- Butterfield Boulevard (Cochrane Road to Monterey Road)
- Hill/Peet Road Corridor (Cochrane Road to Tennant Avenue)
- Monterey Road (the current 4-lane arterial may be narrowed to a 2-lane arterial)
- Murphy Avenue/Mission View Drive Corridor (Cochrane Road to Maple Avenue)
- Santa Teresa/Hale Corridor

East/West Arterial Roadways

- Cochrane Road (Monterey Road to Peet Road)
- Dunne Avenue (Santa Teresa Corridor to Gallop Drive)
- Edmundson Avenue (Santa Teresa Corridor to Monterey Road)
- Main Avenue (Hale Avenue to Hill Road Corridor)
- Madrone Parkway (west and east of Monterey Road)
- Llagas Road Connection (Hale/Santa Teresa Corridor to Monterey/Old Monterey)
- East Middle (Monterey Road to Murphy Avenue – outside City of Morgan Hill Sphere of Influence)
- Tennant Avenue (Monterey Road to Hill Road)
- Watsonville Road (connected to Butterfield Corridor)

3g. Require development that occurs along arterial streets to obtain access through a local street or major entrance and not through curb cuts directly onto the arterial street wherever possible.

3h. Require Planned Developments (PDs) for commercial, office or industrial uses at the intersections of Highway 101 and arterial streets (as designated on the Circulation Element Map) to take access from a public street intersecting with the arterial street a minimum distance of 600 feet from the freeway on and off ramps unless the City Engineer finds that direct access to the arterial street or closer access will meet safety standards or that mitigating actions will be taken to ensure safe access and minimum interference with traffic flows.

3i. Plan for the construction of grade-separated crossings of the Union Pacific railroad to improve emergency vehicle response times, and minimize conflicts between railroad trains and on-road vehicles. California Public Utilities Commission approval is required to modify an existing highway rail crossing or to construct a new crossing. Grade-separated crossings should be encouraged at the following locations:

- Dunne Avenue (Depot Street to be re-routed through the existing Community and Cultural Center parking lot to create an intersection with Church Street either prior to or in conjunction with the grade separation project);
- the future easterly extension of Watsonville Road to connect with Butterfield Boulevard (as an overcrossing); andMadrone Parkway Crossing north of Cochrane Road In the long term, the Madrone Parkway Crossing is planned to be a 2-lane arterial grade-separated from the Union Pacific Railroad tracks, however as an alternate or interim improvement the City may pursue a 2-lane at-grade crossing in exchange for closing the existing 2-lane at-grade crossing at San Pedro.

3j. Give special consideration to the design of Monterey Road, balancing its functions as an arterial street, a "main street" accommodating downtown activities, and as an access road to the downtown and the major commercial areas of the city.

3k. Require arterial streets to minimize the use of fences and walls in adjacent developments wherever possible. Strive to accommodate all modes of travel on arterial streets, and improve the Butterfield Corridor, Monterey Road Corridor, and Hale/Santa Teresa Corridor to the extent feasible as well-landscaped multi-modal boulevards.

3l. Continue to implement the program for planting street trees and landscaping arterial streets and major intersections.

3m. Establish and maintain the right-of-way for two continuous arterial streets east of Highway 101, generally utilizing the existing alignments of Murphy Avenue/Mission View Drive and Hill/Peet Roads, both of which are designated as 2-lane arterials.

3n. Establish and maintain the right-of-way for three continuous arterial corridors west of Highway 101, generally utilizing the existing and planned alignments for Santa Teresa/Hale Corridor, Monterey Road, and Butterfield Boulevard Corridor, with planned connections to Madrone Parkway and Watsonville Road. These arterials will reflect different numbers of lanes and improvement standards, but each will provide continuous, linked arterial transportation routes.

3o. Cooperate with the County in efforts to connect Murphy Avenue to Mission View Drive and Burnett Avenue, and Hill Road to Peet Road.

3p. Obtain sufficient right-of-way for Hale/Santa Teresa Boulevard to accommodate on-street bike lanes, off-street sidewalks and Class 1 Bikeway within a linear park, and medians with turn pockets for new segments, as a multi-modal 2-lane arterial. Pursue funding to improve the unincorporated and existing portions of Hale/Santa Teresa with appropriate pedestrian and bicycle improvements as feasible.

3q. Periodically review speed limits on all city streets.

3r. Require the following streets to be built to collector standards in the locations designated on the Circulation Element Map, and encourage the County to improve these roadways to collector standards in unincorporated areas:

North/South Collector Roadways

- Church Street (Dunne Avenue to Tennant Avenue)
- Condit Road
- Del Monte Street (Llagas Road to Wright Avenue, Dunne Avenue to Cosmo Avenue)
- Depot Street
- DeWitt Avenue (Dunne Avenue to Spring Avenue)
- Foothill Avenue
- La Alameda Drive
- Murphy Avenue Corridor (north of Cochrane Road)
- Old Monterey Road (Llagas Road to Monterey Road)
- Olive Avenue
- Olympic Drive
- Peak Avenue
- Saddleback Drive
- Serene Drive - East Lane
- Sutter Boulevard
- Trail Drive
- Vista de Lomas Avenue
- Walnut Grove Drive / Juan Hernandez (Tennant Avenue to Diana Avenue)

East/West Collector Roadways

- Barrett Avenue (Juan Hernandez Drive to Butterfield Boulevard and Church Street to Monterey Road)Burnett Avenue (Monterey Road to Vista de Lomas Avenue)
- Central Avenue (Butterfield Boulevard to East Lane)
- Cochrane Road (Peet Road to Malaguerra Drive)
- Cosmo Avenue
- Diana Avenue (Butterfield Boulevard to Laurel Road, Condit Road to Hill Road Corridor)
- East Dunne Avenue (Gallop Drive to Jackson Oaks Drive)
- West Dunne Avenue (Santa Teresa Corridor to DeWitt Avenue)
- Fountain Oaks Drive
- Half Road (Condit Road to Hill Road Corridor)
- Hill Road (Tennant Avenue to Maple Avenue)
- La Crosse Drive
- Llagas Road (Old Monterey Road to Woodland Acres)
- Main Avenue (Hale Avenue to Peak Avenue)
- Native Dancer Drive
- San Pedro Avenue (Spring Avenue Connector to Laurel Road, Condit Road to Hill Road)
- Spring Avenue (Santa Teresa Corridor to San Pedro Avenue Connector)
- Tennant Avenue (Hill Road to Foothill Avenue)
- Vineyard Boulevard (La Crosse Drive to Tennant Avenue)
- Wright Avenue (Monterey Road to Peak Avenue)

3s. Preserve options for future transportation facilities in advance of development by such means as identification of routes, acquisition and/or reservation of rights-of-way, setback of development to accommodate future width lines, and limiting of access along future major arterials. (SCJAP 11.06)

Actions

3.1 Require any proposals to amend the General Plan that would result in an increase in traffic generation to demonstrate that adopted applicable LOS standards would be maintained or that mitigation measures are adequate to maintain acceptable LOS on the street system; unless an EIR is prepared and a Statement of Overriding Considerations is adopted by the City which includes findings about the unacceptable effects that would occur if the full mitigation measures were required (see Policies and Actions under Goal 9) The Findings and Statement of Overriding Considerations adopted with certification of the Final EIR for the 2010 Circulation Element Update in February 2010 meet this policy for establishing the Tiered LOS Standard for the Downtown and the road segments, intersections and freeway ramps identified in Policy 3d.

3.2 Develop an ongoing system of traffic counting and monitoring to determine whether or not service levels are being maintained throughout the community and to ensure that the impacts of new development are based on current traffic data.

3.3 Use the adopted Guidelines for Preparation of Transportation Impact Analyses in conjunction with the Tiered LOS Policy Standard as the standards and thresholds used by applicants, consultants and City staff in the preparation of traffic studies and application of the LOS standard.

3.4 Consult with transportation planners to determine the appropriate assumptions and methodology for addressing traffic analysis for land uses with special analysis issues. These land uses include schools, churches, and recreational facilities where certain transportation modes (e.g., bicycles or pedestrians), or certain types of analyses (e.g., parking, off-peak periods, or weekend periods) are important.

3.5 Maintain, regularly review, and update as necessary, the system of fees and assessments to cover the cumulative impacts of new development and land acquisition and construction cost changes on the overall road system.

3.6 Establish a list of priorities for roadway improvements and establish funding mechanisms to ensure that roadway improvements can be built when needed.

3.7 Use financial mechanisms such as assessment districts and reimbursement districts for repayment to developers for one-half street and other public improvements not normally required with the development.

3.8 Use City capital funds, redevelopment tax increment funds, assessment district funds, and State and Federal grant funds to complete those portions of arterial streets not upgraded by developers.

3.9 Assign all roadways in the city street system to a functional classification (some with sub-classifications), and develop standard improvement designs for each classification and sub-classification. The functional classification system designates the purpose and physical characteristics of the roadways, and is composed of the following seven classifications, with the noted sub-classifications:

- State Freeway,
- 2-Lane Arterial (minor, major and multi-modal)
- 4-Lane Arterial (major and multi-modal)
- 6-Lane Arterial
- Commercial/Industrial Collector (major and minor)
- Residential Collector (major and minor)
- Local Street

3.10 Establish improvement projects as necessary through assessment districts, grants and other appropriate sources; such as use of Redevelopment Agency funds for all or a portion of the costs of the Tennant/101 Interchange, Hale/Santa Teresa Corridor, Butterfield Corridor and Watsonville Road , and for Downtown Morgan Hill.

3.11 Require parcels within 400 feet of each side of the Union Pacific Railroad right-of-way and adjacent to arterial streets (as shown on the Circulation Element map) to develop in a manner that minimizes interference with future grade separations of the railroad tracks and the arterial street.

3.12 Pursue funding sources for conversion of existing at-grade crossings to grade-separated crossings with Union Pacific (e.g., as part of possible future track improvements), and the California Public Utilities Commission (e.g., through CPUC Code Section 1202.5).

3.13 The planning and design of the Watsonville Road extension will include a grade-separated overcrossing of the Union Pacific Railroad.

3.14 Where appropriate, the street design for Monterey Road should include a landscaped median with left-turn pockets at intervals approved by the City; however in the downtown an alternate design may be approved by the City Council as the result of a streetscape planning process to implement Downtown goals.

3.15 Through the Design Permit process, strive to provide a coordinated design for improvements of residential properties fronting on Dunne Avenue in order to maximize the potential for improved landscaping and design.

3.16 Landscape and include street trees in the public right-of-way (exclusive of paved areas) and medians.

3.17 Until such time that grade-separation funding is available for Madrone Parkway Crossing, the City may pursue approval from Union Pacific and the California Public Utilities Commission to establish a new at-grade crossing for a 2-lane Madrone Parkway Crossing north of Cochrane, in exchange for closing the existing 2-lane San Pedro at-grade crossing, as an alternate or interim improvement.

3.18 In cooperation with the County, determine what traffic facilities are needed south of Tennant Avenue and the Hill Road area, with consideration to the location of the city's Urban Limit Line and regional growth projections.

3.19 Construct roadway extensions and connections to complete the roadway system.

3.20 Require preservation of rights-of-way between existing street portions in order to aid in completing these streets.

3.21 Establish Murphy Avenue connecting to Mission View Drive as a 2-lane arterial north-south route. Retain Condit Road as a 2-lane major collector.

3.22 Prepare alignment study for the Hill – Peet Road corridor to determine the most appropriate and efficient way of connecting these discontinuous streets.

Goal 4: Emphasis on transportation improvements in the Butterfield, Hale/Santa Teresa and Monterey corridors

Policies

4a. Establish, maintain and implement an adequate right-of-way for a major multi-modal arterial along Butterfield Boulevard, with 4 lanes extending from Cochrane Road to its connection with Watsonville Road at Monterey Road at the south end of town; and with 2 lanes extending north of Cochrane Road to connect with Madrone Parkway.

4b. Connect Monterey Road to Butterfield Boulevard both at the north and south end of town - generally in the vicinity of Cochrane Road at the north, and at Watsonville Road at the south.

4c. Provide for a new connection of Monterey Road to the Santa Teresa Corridor north of Cochrane Road through the Madrone Parkway crossing of the UP rail corridor, as well as through the Llagas Road Connection between Old Monterey/Monterey and Hale/Santa Teresa.

4d. Provide for the extension of Watsonville Road east across Monterey Road to connect with Butterfield Boulevard.

Action

4.1 Use Redevelopment Agency funds to assist with implementation of the Butterfield Boulevard connection south of Tennant to Monterey/Watsonville Road; and take actions to preserve and/or

obtain right of way and funding to implement the Butterfield North connection to Madrone Parkway and to establish the Madrone Parkway Crossing of Monterey Road and the UPRR corridor to connect to the Santa Teresa/Hale Corridor. Study and possibly plan for a future extension of Butterfield north of Madrone to connect to Burnett Avenue, perhaps then turning west to connect to Tilton Avenue.

4.2 For the Monterey Corridor segments outside of Downtown, pursue grants, developer, Redevelopment Agency and other funding sources to make streetscape improvements, including but not limited to filling in missing sidewalks, undergrounding utilities, extending landscaped medians between Dunne and Tennant Avenue, widening the Monterey Road underpass of the UPRR bridge to accommodate 4 vehicular travel lanes along with pedestrian and bicycle facilities; and connecting Old Monterey Road to the future Llagas Creek Drive Connection between Monterey and Hale/Santa Teresa.

4.3 For the segment of Monterey Road through the Downtown, the City should carry out a streetscape design alternatives planning process, and consider both the 4-lane and 2-lane configurations, prior to any City Council decision about number of lanes and allocation of the right of way to purposes such as vehicular lanes, bicycle lanes, widened sidewalks, on-street parking, median, bus turnouts and shelters, landscaping, and gateway entrances.

4.4 Construct the missing segments and improve the Hale/Santa Teresa Corridor to provide a single continuous route. New segments and improvements within Morgan Hill are planned as a 2-lane multi-modal arterial, with a separated Class 1 bikeway and pedestrian path in a linear parkway. The 2-lane multi-modal segments would have sufficient right of way to enable a future 4-lane configuration, if needed. The City will work the County of Santa Clara to seek funding to improve the existing segments within the County to better accommodate bicyclists and pedestrians.

Goal 5: Adequate off-street parking

Policies

5a. Ensure that all developments provide adequate and convenient parking (also see Policy CD-13f). In the Downtown, implement the Parking Resources Supply and Management Strategy in order to monitor and ensure provision of a public parking supply adequate to serve non-residential uses, with no on-site requirement for non-residential development. Continue to identify and implement policies and pricing strategies that encourage alternatives to single-occupant vehicle use.

5b. Design development projects with due consideration to linking off-street parking facilities, where applicable.

Actions

5.1 Periodically review parking standards to ensure their adequacy.

5.2 Review the existing parking ordinance and amend where needed to provide for adequate on and off street parking throughout the city.

5.3 Require cross-connection of parking lots, where feasible and practical, at the time of design review for all commercial and industrial developments.

Goal 6: A safe and efficient transit system that reduces congestion by providing viable non-automotive modes of transportation

Policies

6a. Coordinate with VTA to provide improved local bus service and to encourage people to ride the bus for local as well as longer trips (e.g., to Gilroy and San Jose). The design of key arterial streets such as Santa Teresa and Monterey Road should consider incorporating bus curb lanes or duckouts, enhanced stop amenities, transit signal priority, and supporting pedestrian improvements.

6b. Work with VTA to increase commuter bus service to and from Morgan Hill, including to access mass transit.

6c. Investigate the creation of an integrated transit transfer center that would provide convenient transfer between bus, auto, bicycle and rail.

6d. Make existing and future commuter bus service convenient and accessible. Coordinate with the Monterey Road streetscape planning process in plan for and implement optimal locations for bus stops, shelters and turnouts in and near the Downtown area.

6e. Promote improved local transit service, including shuttle service through the downtown and major shopping and employment centers.

6f. Support a Countywide car/vanpool matching program.

6g. Support Countywide programs to encourage employers to promote use of mass transportation.

6h. Encourage employers to provide a flexible set of working hours to ease traffic congestion.

6i. Use advanced technologies to enhance and improve safety and mobility.

6j. Expand public transit as needed to meet the changing needs of the area for local and regional access, including such methods as bus, dial-a-ride, paratransit and rail, where appropriate. (11.04)

6k. Encourage opportunities for funding partnerships between the City, private enterprises, developers, and VTA to provide enhanced transit services or infrastructure.

6l. Investigate opportunities for preparing and implementing Air Quality and Transportation Demand Management Plans by employers and developers of new residential and non-residential developments.

Actions

6.1 Encourage and support CalTrain service retention and expansion in Morgan Hill, including in the reverse commute direction.

6.2 Work with VTA toward providing express and commuter bus service to connect Morgan Hill with light rail stations.

6.3 Work with VTA in planning for light rail service to Morgan Hill, including location of routes and stations.

6.4 Work with the Santa Clara County Valley Transportation Authority (VTA) to develop a transit information center where bus schedules are shown and transfer information is given.

6.5 Work with the VTA to install enclosed bus shelters at major bus stops.

6.6 Require developers to install bus shelters compatible with City architectural standards, where appropriate.

6.7 Investigate the possibility of locating park and ride facilities on the east side of Highway 101.

6.8 Investigate methods of working with employers to encourage 10 percent of their employees to utilize carpools, transit or other systems consistent with transportation demand management programs.

6.9 Investigate methods of encouraging or requiring employers with 10 or more employees to provide parking with car and van pool spaces convenient to the employee entrance.

6.10 Prohibit long-term on-street parking in the industrial and commercial area of the city.

6.11 Require all businesses with 100 or more employees to work with county and regional ride sharing associations to coordinate ride sharing programs.

6.12 Work with VTA and the State to implement Transportation Demand Management technologies that can improve the performance, reliability, and safety of the transportation system, such as signal coordination, centralized traffic control, red-light and speed enforcement cameras, and real-time travel information.

Bikeways

Morgan Hill provides an ideal environment for cycling. The City is on relatively flat terrain and enjoys a moderate climate. As a small city, virtually any area is accessible by bicycle. In addition, the City is blessed with scenic surroundings, including many rural roads frequented by recreational cyclists that lead to the adjacent hills and agricultural lands. The City has adopted a Bikeways Master Plan to guide future implementation of a citywide bikeway system (see *Map 5*).

Goal 7: A useable and comprehensive bikeway system that safely connects neighborhoods with workplaces and community destinations

Policies

7a. The bikeways system shall recognize and reflect the needs and abilities of cyclists with a diverse range of age and experience, from children learning to ride bicycles to experienced adult commute cyclists.

7b. Encourage increased use of bicycles for adults commuting to work and for students traveling to school through a safe and efficient bikeways system, enhanced bicycle parking facilities, and bicycle safety and promotion programs, including showers for bicycle commuters at places of employment.

7c. Establish alternative routes, with direct routes on busy streets for experienced cyclists, and less direct routes on bicycle paths and quieter streets for less experienced and recreational cyclists.

7d. Development of the bikeways system shall be coordinated with the Santa Clara Countywide Trails Master Plan, the Santa Clara Countywide Bicycle Plan, the South County Joint Area Plan, the Santa Clara County Bicycle Technical Guidelines, and the California Department of Transportation Highway Design Manual.

7e. Where feasible, incorporate the Bicycle Technical Guidelines prepared by the Valley Transportation Authority into City standards for bicycle facility planning and design, including intersection striping, signalization, and railroad crossings.

7f. All multi-use bicycle/pedestrian trails shall comply with State and Federal accessibility codes and standards, such as those established by the Americans with Disability Act (ADA) and California Access Code (Title 24, California Code of Regulation).

7g. Private roads shall be designated as part of the bikeways plan only if there is an agreement between the City and the appropriate owner for such a designation.

7h. Where feasible, implement the bikeways system concurrent with adjacent development. Establish priorities for bikeways implementation based on improving safety and enhancing both commute and recreational cycling. These priorities shall be considered in directing resources and efforts to obtain funding for implementation. Priorities shall be regularly reviewed and updated as implementation proceeds. Current priorities for implementation of the bikeways plan include the following:

- Live Oak High School Access
- Little Llagas Creek Trail
- Santa Teresa and Monterey Highway Corridor Improvements

- East West Connection to Coyote Creek Trail

7i. Incorporate emergency services (fire and police) into the review process for new bikeways.

7j. Define safe pedestrian and bicycle routes to all new schools (public and private) during the planning and design process so that these routes can be developed and in place prior to opening the school.

7k. For multi-jurisdictional alignments, develop partnerships with Santa Clara County to plan, finance, implement and maintain the bikeways system.

7l. Bicycle parking facilities shall be provided at all schools, parks, recreation facilities, commercial centers, civic buildings (including the library), transit centers, and work places based on the recommendations and standards in the Bikeways Master Plan.

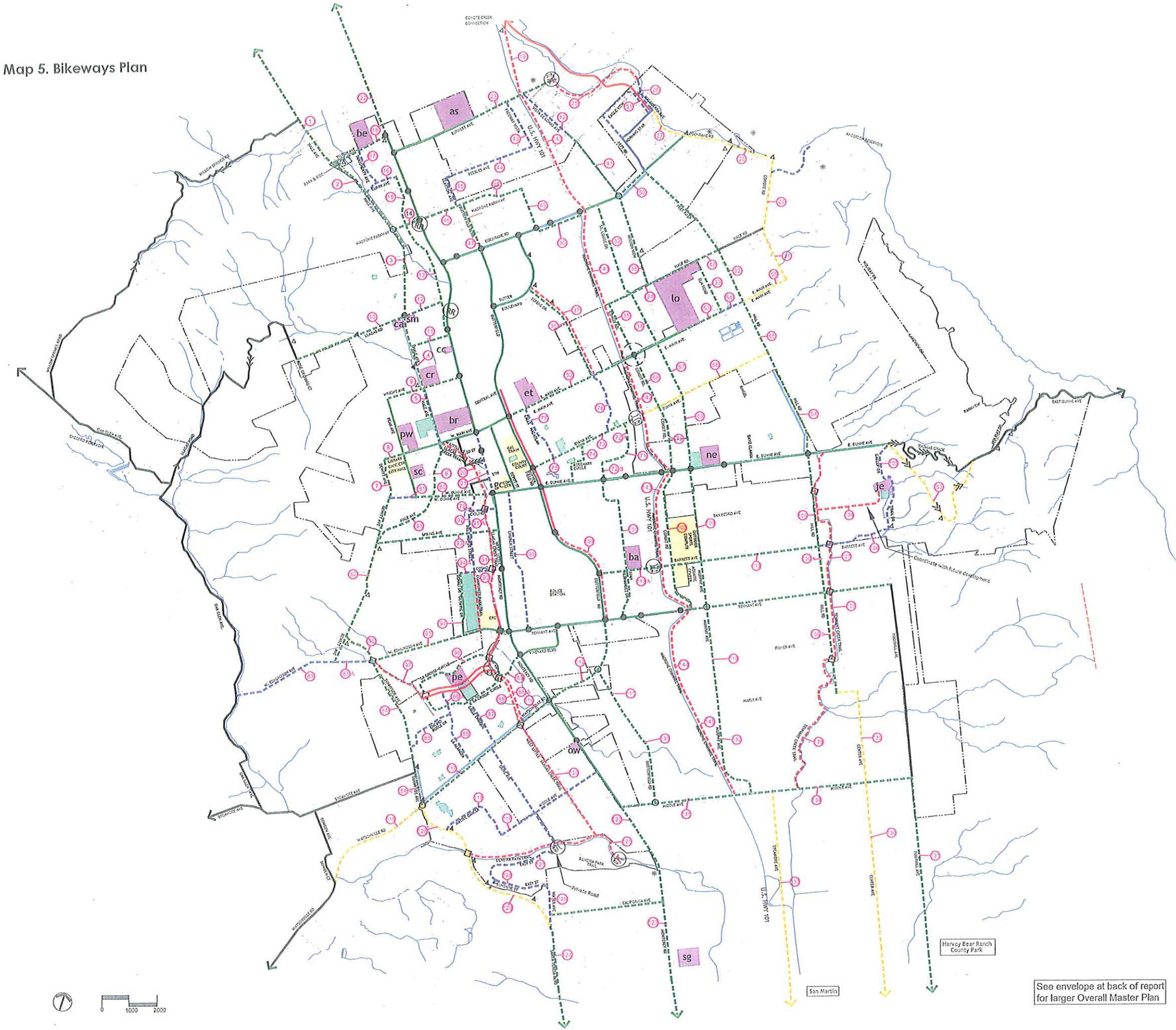
7m. Where safety permits, improve connectivity by requiring pedestrian and bicycle public access from a cul-de-sac to an adjacent public amenity, such as a park or school, or from a cul-de-sac to an adjacent street.

7n. Implement and maintain the City's bikeways system based on standards established in the Bikeways Master Plan.

7o. Continue to encourage bicycle safety and promotion programs, in partnership with other agencies and organizations.

7p. Promote extension of bicycle paths in conjunction with flood control efforts.

Map 5. Bikeways Plan



Legend

Existing Parks & Schools Legend

- ( ) Community Facilities
- City Owned Parks
- Schools

as . . . . . Ann Sobrato High School MHUSD
ba . . . . . Barrett Elementary School MHUSD
be . . . . . Burnett Elementary School MHUSD
br . . . . . Britton Middle School MHUSD
cc . Central Continuation High/Community Adult MHUSD
et . . . . . El Toro Elementary School MHUSD
gc . . . . . Gavilan College
je . . . . . Jackson Elementary School MHUSD
lo . . . . . Live Oak High School MHUSD
ne . . . . . Nordstrom Elementary School MHUSD
pe . . Paradise Valley/Macado Elementary School MHUSD
pw . . . . . P.J. Walsh Elementary School MHUSD
cr . . . . . Crossroads Christian School
sc . . . . . St. Catherine's School
sg . . . . . San Martin/Gwinn Elementary MHUSD
ca . . . . . Carden Academy
sm . . . . . Shadow Mountain Baptist School
ow . . . . . Oakwood Country School
mh . . . . . Martin Murphy Middle School MHUSD
located outside map boundary

Class	Existing	Proposed	Description
1			Shared-Use Path
2			Bike Lane, Both Sides
2			Bike Lane, Existing One Side, Proposed Both Sides. (Existing Shown on Side of Occurrence)
3			Bike Route
3b			Bike Route w/Shoulder Striping
			Scenic Road Frequented by Cyclists with Narrow, Outside Lane and Limited or no Shoulder

- (1) Bikeways Segment #
- ▲ △ Connection to Existing/Proposed Trails (see Trails & Natural Resources Study))
- ✳ Trail Staging Area (see Trails & & Natural Resources Study)
- ● ○ Traffic Signal
- ■ □ Median Refuge
- Intersection Improvement
- Bike/Pedestrian Bridge
- RR Railroad Grade Crossing or Over/Undercrossing
- Sector Number

4-6% 7-8% 9%+ Hills (Dart Points Uphill)

City Limit

Creeks

Notes:
This map is for planning purposes only. Many of the shared use paths identified on the map are simply proposed and are not currently open to the public for any purpose. On-street bicycle lanes, paths, and routes shown as proposed may have current conditions that are unsafe for cyclists, and the City bears no responsibility or liability for use of such paths.

City of Morgan Hill

Bikeways Master Plan Update

Overall Master Plan

Bellinger Foster Steinmetz
Landscape Architecture
425 Pacific Avenue, Suite 201
Monterey, CA 93940
Ph 831.646.1333 Fax 831.373.8553 EM gs@bfsla.com

Project #: 06.101 Date: May 2008

Actions

7.1 Actively pursue a variety of funding sources for implementation of the Bikeways Master Plan, including development impact fees, incorporating improvements into larger transportation projects, requiring improvements concurrent with development, grants, and joint projects with other agencies. Grant applications shall be focused on priority projects where appropriate.

7.2 Coordinate with the Morgan Hill Unified School District (MHUSD) and other schools where appropriate in applying for "Safe Routes to School" and other school-related grant programs to improve bicycle connections to schools.

7.3 Establish a development review checklist for use by City staff to evaluate development applications and their consistency with the Bikeways Master Plan, including bicycle parking facilities and off-site improvements where appropriate, such as roadway striping, signage and intersection improvements.

7.4 Develop a way-finding system for the City's bikeways network, including signage along paths, lanes and routes indicating key destination points, and a public bikeways map suitable for public distribution.

7.5 Incorporate bikeways maintenance tasks, (such as street sweeping and lane re-striping), into regularly-scheduled street maintenance cycles.

7.6 Actively pursue bicycle safety and promotion programs as outlined in the Bikeways Master Plan, encouraging partnerships with the police department, MHUSD, bicycle clubs, and other interested agencies and organizations.

Goal 8: Expanded pedestrian opportunities

Policies

8a. Ensure adequate pedestrian access in all developments, with special emphasis on pedestrian connections in the downtown area, in shopping areas and major work centers, including sidewalks in industrial areas in accordance with the Trails and Natural Resources Master Plan.

8b. Promote walking as an alternate transportation mode for its contribution to health and the reduction of energy consumption and pollution. (SCJAP 11.03).

8c. The Trails and pedestrian system shall recognize and reflect the needs and abilities of pedestrians with a diverse range of age and experiences.

8d. Development of the trails and pedestrian system shall be coordinated with the City's Bikeways Master Plan, City standard details, Santa Clara Countywide Trails Master Plan, the Santa Clara Countywide Bicycle Plan, the South County Joint Area Plan, the Santa Clara County Bicycle Technical Guidelines, and the California Department of Transportation Highway Design Manual.

8e. Trails shall comply with the Trail Guidelines included in the Trails and Natural Resources Master Plan.

8f. All trails and pedestrian accesses shall comply with State and Federal accessibility codes and standards, such as those established by the Americans with Disability Act (ADA) and California Access Code (Title 24, California Code of Regulation).

8g. Where feasible, implement the trails and pedestrian system concurrent with adjacent developments.

8h. Incorporate emergency services (fire and police) into the review process for new trails.

8i. For multi-jurisdictional alignments, develop partnerships with Santa Clara County to plan, finance, implement and maintain the trail system.

8j. Improve sidewalk connectivity, by installing new sidewalks where they do not exist, consistent with the Trails and Natural Resources Master Plan.

8k. Implement and maintain the City's trails system based on standards established in the Trails and Natural Resources Master Plan.

8l. Promote new trails and extend existing trails in conjunction with flood control efforts.

Actions

8.1 Actively pursue a variety of funding sources for implementation of the Trails and Natural Resources Master Plan, including the development of impact fees, incorporating improvements into larger transportation projects, requiring improvements concurrent with development, grants, and joint projects with other agencies. Grant applications shall be focused on projects that provide the highest use and best value for the residents of Morgan Hill.

8.2 Establish a development review checklist for use by City staff to evaluate development applications and their consistency with the Trails and Natural Resources Master Plan, including staging and parking areas for trail access.

8.3 Incorporate pedestrian and trail maintenance tasks into regularly-scheduled maintenance cycles.

8.4 Actively encouraging partnerships with the police department, MHUSD, County of Santa Clara and other interested agencies and local organizations to develop safe pedestrian access and trail routes throughout the City.

Goal 9: A system based on Smart Growth and Sustainable Communities strategies; reflecting a balanced, safe, multi-modal transportation system, especially in Downtown where pedestrian, bicycle and transit facilities will be emphasized along with vehicular facilities

Policies

9a. Use Smart Growth principles throughout the City to create and maintain a vibrant community with a balanced, multi-modal transportation system that offers viable choices for residents, employees, customers, visitors and recreational users.

9b. Recognize the unique nature of and goals for Downtown Morgan Hill as the transit hub of the city and as a center for shopping, business, entertainment, civic and cultural events, and higher-density, mixed-use living opportunities; and exempt the Downtown from meeting vehicular traffic level of service standard and from traffic mitigation requirements. This exemption would not preclude the City, Redevelopment Agency, developers and property owners from voluntarily implementing improvements and employing operational strategies to improve level of service, especially at the Main/Monterey intersection if and when land uses redevelop.

Actions

9.1 Establish a Level of Service "F" Policy standard for the Downtown Core area, including the following streets and area bounded by them: Dunne Avenue, Del Monte, Main Street, and Depot Street. (see Goal 3, Policy 3d)

9.2 In order to provide a transition to intersections and road segments that have established Level of Service standards of "E" and "F", for freeway access zones, on-ramps and the Downtown, establish selected intersections and segments that are also designed to an acceptable LOS "E" standard for peak hours. (see Goal 3, Policy 3d) However, require downtown projects to pay the city's standard traffic impact fees imposed on new developments.

9.3 In order not to overbuild intersections and segments on facilities which serve a significant component of sub-regional and regional through traffic in peak hours, and to protect neighborhoods, and to create an incentive for using alternate modes of travel, and to reduce the incentive for regional travel to be drawn off of the freeway and onto local streets, establish a Level of Service "E" standard and design standard for selected intersections and segments. (see Goal 3, Policy 3d)

9.4 For non-Downtown Core intersections (14 block area), when future traffic studies determine that an intersection, roadway segment, or freeway level of service will fall below its adopted standard, then the studies will identify appropriate mitigation measures to ensure that the applicable level of service standard is attained. If a proposed traffic mitigation measure requires improvements for

vehicular transportation that are beyond the jurisdiction of the City of Morgan Hill, and/or would have unacceptable impacts on existing buildings, or existing or planned transportation facilities and/or alternate modes of transportation including roads, sidewalks, bicycle and transit facilities; the City may (but would not be required to) impose alternative mitigation measures that do not create the unacceptable impacts. If the measures retain the "pre-project" level of service standard for the affected facilities then an Environmental Impact Report may not be required. However, it may be necessary for the City to prepare and certify an Environmental Impact Report, and adopt a Statement of Overriding Considerations, if a project's impacts cannot be mitigated in an acceptable manner but the City determines to approve the project. In this situation, the City may still require feasible mitigation measures and/or conditions of approval to require contributions to improving the city's transportation system.

9.5 The types of impacts from identified vehicular traffic mitigation measures that may be determined by the City to be unacceptable include but are not limited to the following:

a. Those that would encourage substantial neighborhood or community cut-through traffic
b. Those that would eliminate or reduce the width of a sidewalk below minimum city standard, where there is not sufficient planned public right-of-way to relocate the sidewalk
c. Those that would eliminating a bicycle lane or reduce its width below city standard, where there is not sufficient planned public right-of-way to relocate the bicycle lane
d. Those that would create unsafe pedestrian, bicycle or vehicular operating conditions
e. Those that would eliminate a bus stop or a parking lane that accommodates a bus stop, which cannot be relocated
f. Those that would require acquisition of substantial existing buildings, and/or extraordinarily high cost of land acquisition, or an extraordinarily high project cost in relation to benefits achieved.

9.6 Alternate mitigation measures and/or conditions of approval may include but not be limited to making improvements to other facilities that assist with maintaining or improving projected levels of service, payment of an in-lieu fee to the city to be used to improve other components of the city's transportation system, developer installation of transportation improvements, and/or incorporation of physical features and operational programs into a project that support Trip Reduction/Travel Demand Management goals.

9.7 While mitigation measures may not be required because level of service would not fall below an applicable LOS E or F standard, the City, Redevelopment Agency, developers, property owners and others are not precluded from identifying and implementing improvements and strategies to improve level of service and reduce congestion. The City should periodically monitor actual traffic conditions and accident data and identify improvements and/or operational strategies that would improve safety and congestion levels, as practical and cost-effective.

9.8 For unsignalized intersections in the downtown area and other key city locations, the City should undertake regular or periodic monitoring of actual traffic conditions and accident data, and timely re-evaluation of the full set of warrants to prioritize and program intersections for signalization, as practical and cost-effective.

9.9 In order to prevent significant noise impacts on neighborhood residents which are related to roadway extensions or construction of new roadways, the City shall require completion of a detailed noise study during project-level design to quantify noise levels generated by projects such as the Murphy Avenue extension to Mission View Drive and the Walnut Grove Extension to Diana Avenue. The study limits should include noise sensitive land uses adjacent to the project alignment as well as those along existing segments that would be connected to new segments. A significant impact would be identified where traffic noise levels would exceed the "normally acceptable" noise level standard for residential land uses and/or where ambient noise levels would be substantially increased with the project. Project specific mitigation measures could include, but not be limited to, considering the location of the planned roadway alignment relative to existing receivers in the vicinity, evaluating the use of noise barriers to attenuate project-generated traffic noise, and/or evaluating the use of "quiet pavement" to minimize traffic noise levels at the source. Mitigation

should be designed to reduce noise levels into compliance with "normally acceptable" levels for residential noise and land use compatibility.

9.10 In order to prevent significant noise impacts on sensitive receptors and neighborhood residents which are related to an at-grade Madrone Parkway Crossing of the UPRR tracks, during project-level design, conduct a detailed noise study to calculate noise levels expected as a result of train warning whistles and warning bells that would be sounded, and to calculate the increase in ambient noise levels resulting from the project. The study limits should include noise sensitive land uses north and south of the at-grade crossing as warning whistles would be expected up to one-quarter mile in each direction. A significant impact would be identified where (it is likely that these receivers are already exposed to noise levels above 60 dBA L_{dn}) where ambient noise levels would be substantially increased with the project. Project specific mitigation measures should include, but not be limited to, evaluating the use of noise barriers to attenuate the warning whistle/bell noise, residential sound insulation, utilizing wayside horns, and/or establishing a train whistle quiet zone per the Federal Railroad Administration's *Final Rule on the Use of Locomotive Horns at Highway-Rail Grade Crossings*. Mitigation should be designed to avoid a substantial permanent increase in noise.